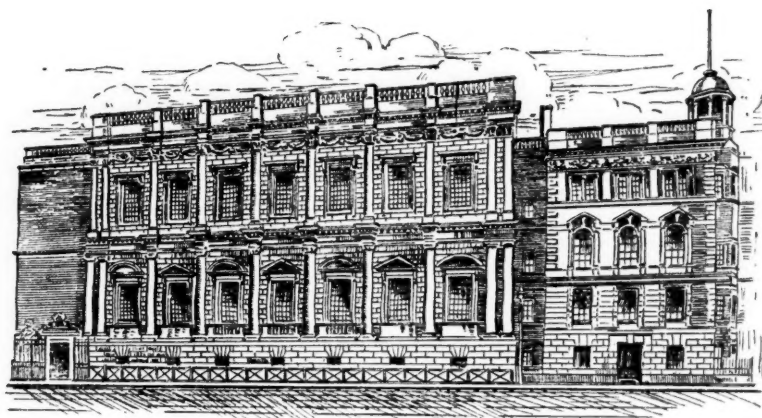


Published Quarterly

JOURNAL
of the
**Royal United Service
Institution.**



Vol. LXXI, No. 484.—NOVEMBER, 1926.



PUBLISHED AT THE
**Royal United Service Institution, Whitehall,
LONDON, S.W.1**

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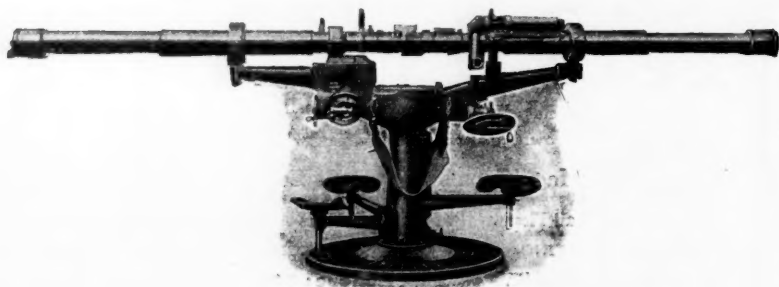
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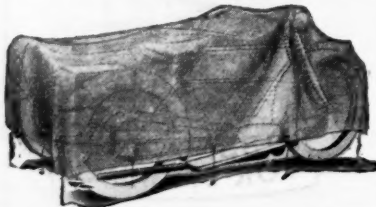
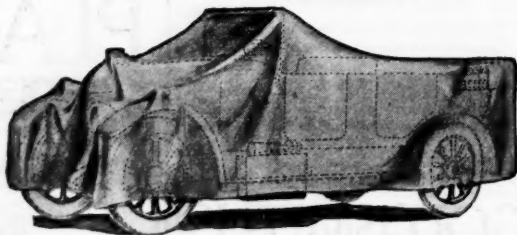
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| 1875. Commander G. H. U. Noel, R.N. | 1902. Major A. H. Terry, A.S.C. |
| 1876. Lieutenant J. F. G. Ross of
Bladensburg, Coldstream Guards. | 1903. Lieutenant A. C. Dewar, R.N. |
| 1877. No Medal awarded. | 1904. Lieut.-Colonel C. E. D. Telfer-
Smollett, 3rd Bn. South Staf-
fordshire Regiment. |
| 1878. Major T. Fraser, R.E.
Captain E. Clayton, R.A. | 1905. Major W. C. Bridge, South Staf-
fordshire Regiment, p.s.c. |
| 1879. Captain The Hon. E. R. Fre-
mantle, C.B., C.M.G., A.D.C.,
R.N. | 1906. Lieutenant B. E. Domville, R.N. |
| 1880. Captain J. K. Trotter, R.A. | 1907. Lieut.-Colonel A. F. Mockler-
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| 1882. No Medal awarded. | 1909. No Medal awarded. |
| 1883. Captain C. Johnstone, R.N. | 1910. Captain P. W. Game, R.H.A. |
| 1884. Captain G. T. Browne, North-
amptonshire Regiment. | 1911. Captain H. T. Russell, late
R.G.A. |
| 1885. Lieutenant F. C. D. Sturdee,
R.N. | 1912. Commander K. G. B. Dewar,
R.N. |
| 1886. Captain C. E. Callwell, R.A. | 1913. Major A. Lawson, 2nd Drags. |
| 1887. No Medal awarded. | 1914-15-16-17. No Medals awarded. |
| 1888. Captain J. F. Daniell, R.M.L.I. | 1918. Lieutenant W. S. R. King-Hall,
R.N. |
| 1889. Captain H. F. Cleveland, R.N. | 1919. Colonel J. F. C. Fuller, D.S.O.,
Oxford & Bucks L.I. |
| 1890. Captain G. E. Benson, R.A. | 1920. No Medal awarded. |
| 1891. Captain R. W. Craigie, R.N. | 1921. Flight-Lieutenant C. J. Mackay,
M.C., D.F.C., R.A.F. |
| 1892. Lieut.-Colonel J. Farquharson,
C.B., R.E. | 1922. Major R. Chenevix - Trench,
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| 1893. Commander F. C. D. Sturdee,
R.N. | 1923. Captain A. H. Norman, C.M.G.,
R.N. |
| 1894. Major F. B. Elmslie, R.A. | 1924. Major L. I. Cowper, O.B.E.,
King's Own Royal Regiment. |
| 1895. Commander J. Honner, R.N. | 1925. Lieut.-Colonel J. C. Dundas, D.S.O.,
Royal Tank Corps. |
| 1896. Captain G. F. Ellison, Queen's
Royal West Surrey Regiment. | |
| 1897. Commander G. A. Ballard, R.N. | |
| 1898. Captain W. B. Brown, R.E. | |
| 1899. Commander G. A. Ballard, R.N. | |
| 1900. No Medal awarded. | |

RECIPIENTS OF THE CHESNEY GOLD MEDAL

(With rank of Officers at the time of the Award).

- | | |
|--|---|
| 1900. Captain A. T. Mahan, United
States Navy. | 1914. Sir Julian S. Corbett, LL.M.,
F.S.A. |
| 1907. Major-General Sir J. F. Maurice,
K.C.B., p.s.c. | 1919. Major-General E. D. Swinton,
C.B., D.S.O. |
| 1909. Hon. J. W. Fortescue, M.V.O. | 1921. Major-General Sir C. E. Callwell,
K.C.B. |
| 1910. Sir J. K. Laughton, Knt., M.A. | 1924. Professor G. A. R. Callender,
M.A., F.S.A. |
| 1911. Professor C. W. C. Oman, M.A.,
F.S.A. | 1925. Captain Sir George Arthur,
Bart., M.V.O. |
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SECRETARY'S NOTES

NOVEMBER, 1926.

I.—The Institution Staff.

The Council have selected Major E. L. Hughes, D.S.O., O.B.E., late Northamptonshire Regiment, to succeed Major H. G. Parkyn, O.B.E., as Librarian, who has been appointed to a similar post at the Staff College in March next. There were nineteen applicants.

II.—Officers Joined.

The following officers joined the Institution during the months of August, September and October, viz. :—

Major W. H. Brooke, M.C., T.A.Res.
Captain R. T. Cooke, R.A.S.C.
Captain R. L. O'Connor, Indian Army.
Commander F. H. G. Dalrymple-Hamilton, R.N.
Captain F. J. Williams, M.C., Royal Inniskilling Fusiliers.
Lieutenant W. A. Crowther, Indian Army.
C. C. Wall, Esq., War Office Civil Staff.
Captain G. R. P. Roupell, V.C., East Surrey Regiment.
Captain C. W. Jacob, late King's Regiment.
Major C. P. F. Warton, O.B.E., Indian Army.
Captain E. J. Muirhead, R.A.
Lieutenant-Colonel J. Wyness, late R.G.A.
Lieutenant M. G. S. Hopson, R.A.S.C.
Captain E. H. P. Mallinson, Indian Army.
Pilot Officer E. J. Martin, R.A.F.
Major-General Sir G. F. Boyd, K.C.B., C.M.G., D.S.O., D.C.M.
Surgeon Rear-Admiral Sir P. B. Handyside, K.B.E., C.B.
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Lieut.-Colonel E. P. Anderson, D.S.O., R.E.
Lieutenant H. L. Boulton, Royal Warwickshire Regiment.
Captain I. C. Byrne, Indian Army.
Lieutenant F. G. Le Gros, R.A.
Captain G. C. Martin, M.C., Lancashire Fusiliers.
Lieutenant P. H. Owens, Royal Corps of Signals.
Lieut.-Colonel G. H. Wilmer, D.S.O., M.C., Essex Regiment.
Captain L. H. Worledge, Indian Army.
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Captain H. T. Tollemache, Royal Marines
Captain C. McV. Gubbins, M.C., R.A.
Major H. B. Inman, M.C., Royal Marines.

ii.

SECRETARY'S NOTES

III.—Lectures.

The Lecture announced for Wednesday, October 27th, was unavoidably postponed owing to the lecturer being detailed for duty with the Fleet Air Arm. The subject of the lecture is "The Royal Air Force Flight from Cairo to the Cape," and will now be delivered on Wednesday, December 8th, at 3 p.m.; the lecturer is Wing-Commander C. W. H. Pulford, O.B.E., A.F.C., R.A.F. The Chair will be taken by the Secretary of State for Air.

The subject of the Lecture on Wednesday, January 26th, 1927, has been amended to "The Effect of Air Power on Naval Strategy"; the lecturer will be Commander A. F. E. Palliser, D.S.C., R.N.

IV.—Gold Medal Essay, Military, 1927.

The Council have selected the following as the subject:—"Prior to 1914, the centre of gravity of military affairs was unmistakably in Europe. We still have military commitments in Europe, imposed on us by treaty or pact, but the centre of gravity is not now so clearly defined. Discuss the organization and training of our military forces, having regard to the situation of to-day."

V.—Gold Medal Essay, Royal Air Force, 1926.

The following essays have been received up to the 31st October:—

1. "The fated sky gives us free scope."
2. "There is many a true word spoken in jest."
3. "*Dona ferentse.*"
4. "*Tendit ad astra fides.*"

VI.—Change of Rank and Address.

The attention of Members is called to the necessity for communicating any changes of rank or address to the Secretary. It is essential that such notification should be made in writing, and only ONE change of address can be registered. The first day of the month in which the JOURNAL is issued is the last day on which such change can be notified in order to take effect for the delivery of the JOURNAL of the current quarter. If such changes are not notified, Members themselves will be responsible if their JOURNALS fail to reach them through being wrongly addressed, and officers are requested to write their names, with initials, distinctly on such communications. Several signatures have recently been received which it has been impossible to decipher, and as there are many instances of Members bearing the same name and initials, it is requested, therefore, that they will add their rank.

VII.—Journal.

The price of the JOURNAL to non-Members, commencing with the February, 1927, issue, will be 7/6 in place of 6/-. To Members requiring additional copies the price will be 4/-, which includes postage.

VIII.—Museum Purchase Fund.

This Fund was opened with the object of purchasing suitable exhibits, which from time to time are offered to the Museum, or are put up for sale at various auctions. The Council hope it will receive support from Members of the Institution who are interested in the Museum.

	£	s.	d.
Amount already acknowledged	76	19	0
N. V. H. Budd	1	1	0
	78	0	0
Less expended to date	46	14	4
	£31	5	8

IX.—The "Implacable."

The following letter has been received :—

Royal Naval College,
Greenwich, S.E.
18th October, 1926.

SIR,—At the final meeting of the Committee appointed by Admiral-of-the-Fleet, Earl Beatty, to raise a sum of £25,000 on behalf of the old Trafalgar ship "Implacable," it was unanimously decided that we should tender our sincere thanks to the Council and Members of the Royal United Service Institution for the facilities afforded there to the Committee for making public and conducting this Appeal. The fact that it received such support from the Institution has, we feel, assisted materially in bringing it to a successful issue.

Believe me, Yours faithfully,
(Sgd.) OWEN SEAMAN,
Chairman.

To the Secretary,
R.U.S.I.,
Whitehall, S.W.1.

X.—The Museum.

The amount taken for admission to the Museum during the past quarter was :—

£175 4s. 6d. in August.
£135 5s. 6d. in September.
£106 11s. 6d. in October.

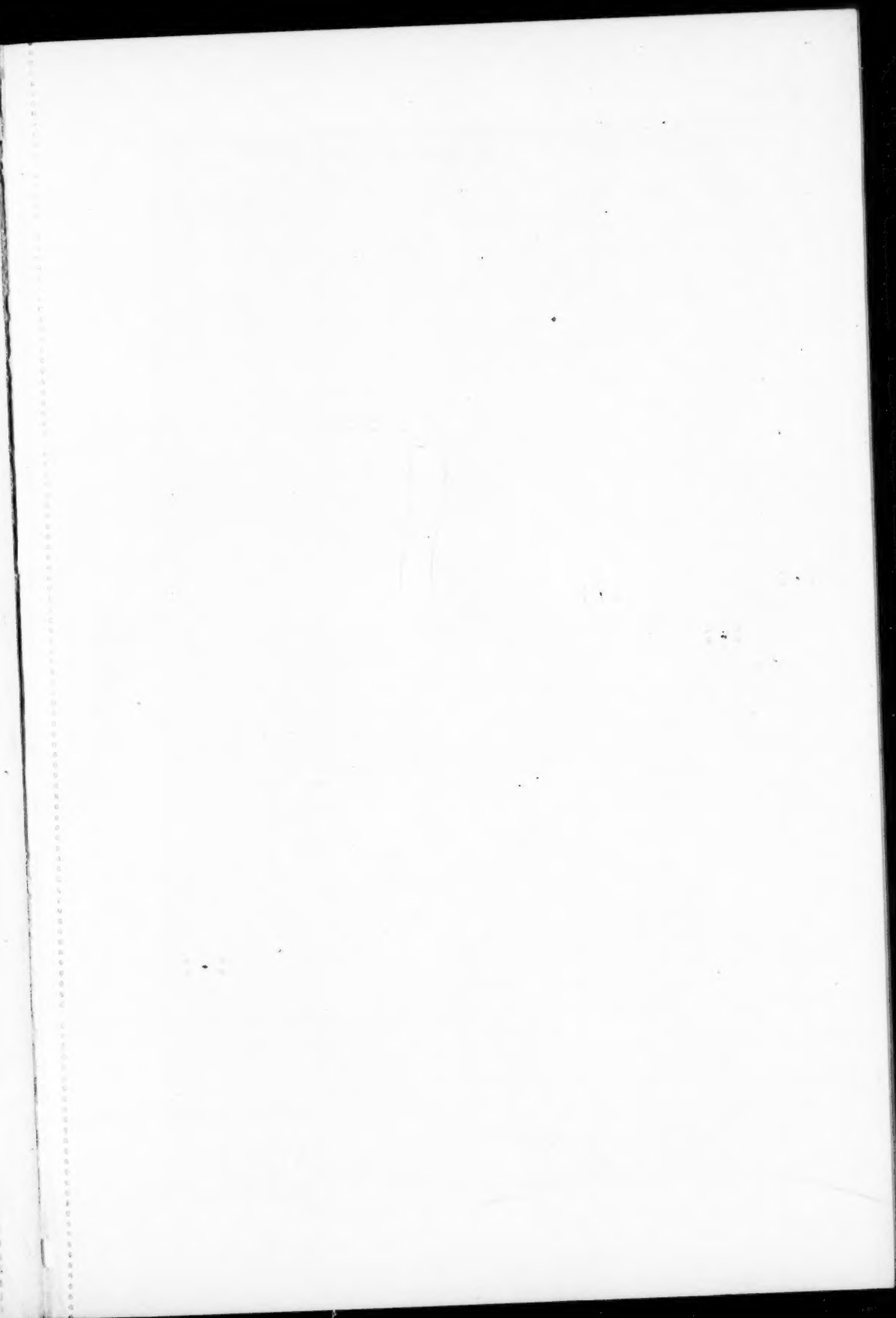
ADDITIONS.

(7919) Two water colour drawings depicting the action between H.M.S. "Shannon" and the American frigate "Chesapeake," on 1st June, 1813, which are the work of Lieutenant James Johns, who commanded the Royal Marines on the "Shannon."—Given by Alan F. Baird.

- (7920) Coloured lithograph engraving, depicting H.M. 3rd Light Dragoons charging the Sikh Batteries at the Battle of Ferozeshah, 21st December, 1845.—Purchased.
- (7921) Token recovered from the wreck of the German cruiser "Emden"; the cruiser was sunk by H.M.A.S. "Sydney" on the 9th November, 1914, at the Cocos Keeling Islands.—Given by Captain S. D. Graham, R.A.
- (7923) Officer's Gorget of the Royal Dockyard Battalion, which belonged to Ensign William Maddock, who joined the Corps in 1803. The Battalion was disbanded in 1814, re-raised in 1846, and lasted until the Crimean War.—Given by his Great Grandchildren.
- (7924) Drum-major's Staff, of the Connaught Rangers. It probably belonged to one of the Service Battalions raised during the Great War.—Given by E. C. Helder.
- (7925) Frame containing twenty-eight Cap Badges of the British Cavalry Regiments of the Line, in use up to 1914.—Given by the Curator.

XI.—Annual Members.

The Secretary will be greatly obliged if those Annual Members who have not yet completed the green Banker's Form raising the Annual Subscription from £1 1s. to £1 5s., which was sent in September last, would kindly do so, also send it here (not to their bank) in order that it may be recorded in the Books previous to this Office forwarding the same to the bank in question. The extra 4s. Subscription includes the former 10s. Subscription to the Lending Library.





Engraved by W. B. Smith

The White as formerly Dedicated to Lord Edward Somerset



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Of the Officers of the Highland Brigade. By their most Obedient Servant
David Low, Jr. JUN. BATH

Engraved by T. G. Shepherd

London, Published by W. B. Smith, at J. G. S. & Co. Military Depot, 48 Strand.

THE JOURNAL
OF THE
Royal United Service Institution

Vol. LXXI.

NOVEMBER, 1926.

No. 484.

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**THE TERRITORIAL ARMY:
BASED ON SUGGESTIONS PUT FORWARD BY THE
WRITERS OF THE GOLD MEDAL ESSAYS, 1924**

By GENERAL SIR IVOR MAXSE, K.C.B., C.V.O., D.S.O.

On Wednesday, 10th March, 1926, at 3 p.m.

FIELD-MARSHAL SIR WILLIAM ROBERTSON, Bart., G.C.B., G.C.M.G.,
K.C.V.O., D.S.O., in the Chair.

LECTURE.

I think I ought to begin by explaining the genesis of to-day's lecture and say why it is given. It was suggested to me by the Council of this Institution that, having acted as one of the referees appointed to judge the essays submitted for the annual Gold Medal of the R.U.S.I., I might perhaps be in a position to summarise and comment upon the more important conclusions put forward by various authors: and the importance of the subject seemed to warrant such treatment.

The title of the essay was:—"Given that there is maintained at Home in peace-time a Field Army of five Regular and fourteen

Territorial Divisions, with Army troops: how can they best be organized to provide for the expansion which a war on a national scale will demand?"

Obviously the important word in this theme is "expansion," and the subject I propose to deal with centres on the part which the Territorial Army might play in that expansion. As you know, the Regular Army has been reduced; the Militia does not exist; and we no longer possess any Special Reserve battalions to supply drafts for forces overseas. I am not suggesting that the Militia should be re-established but will remind you that in the last war we raised in this country no less than 65 Divisions, and these proved none too many. The expansion of our forces is then the problem with which we are faced.

I would divide my remarks more or less roughly under the following headings:—

- (1) How are we to expand our diminished Forces? What is to be the rôle of the Territorial Army?
- (2) Expansion is easier than the training of the expanded units, because the number of expert trainers available is insufficient.
- (3) A National Register of the manhood of the nation ready to apply on outbreak of war is a necessity.
- (4) Lord Kitchener's problem in 1914. He possessed no register and no expert trainers for a million men.
- (5) Why he created new divisions instead of building on Territorial Divisions.
- (6) The Gold Medal Essayists, 1924, favour an expansion of the Territorial Army, if forethought will provide proper machinery.
- (7) We should not rob Peter (Regular Army) to pay Paul (Territorial Army) but we must arrange to train the units, provided that we take precautions beforehand. Brains are needed more than cash.
- (8) The Territorial Army produces the cheapest divisions, but do we make the most of them?
- (9) Are Territorial Associations competent to expand fourteen divisions into forty divisions?
- (10) We fail to simplify Territorial training in peace time, as we easily could.
- (11) A description of what a Territorial battalion can do, and is doing in Staffordshire shows what could be done elsewhere.
- (12) Omnibus or Drill Hall—which will you have?

The first six points refer to matters which could be attended to if a statesman arose; and the last six, those should be dealt with by soldiers without further ado.

I do not suggest that the above exhaust the subject—still less that they are final: I put them forward in the hope of stimulating thought and action on vital topics. Neither do I aspire to go into each in detail.

In view of the fact that we have now reduced our Regular forces to a bare minimum, and that we have virtually no great reserves for any machinery ready to expand these forces, I think we may agree with the essayists, and accept the principle that the brunt of expanding our Army must fall on the Territorial organization.

At the outset, the essayists were of course confronted with the problem of compulsory service. It is no use blinking the fact that to expand a volunteer peace establishment into a compulsory war army is no easy task. The officers who grappled with the thorny subject recognised that next to compulsion the essential feature of the problem is training. It is clearly of not much avail to realise expansion if no trainers are available to instruct and shape the newly expanded units so as to render them fit to fight.

I think I may be allowed to throw in one word about compulsory service, and then drop it. You will remember that by the Treaty of Versailles, Germany was compelled to adopt a voluntary system of recruitment; that is to say, the victors of the Great War forced the losers to adopt a system which experience has proved to be the worst of all methods of expanding small forces into a national army!

As the surest means of carrying out our own expansion on any future occasion, the best of the essays unhesitatingly advocated a National Register, that is to say, a register of the manhood of Great Britain worked out in peace-time and maintained in readiness to be applied on the outbreak of a war. In fact, it is sufficient to state that these essayists considered our problem of expansion as likely to become chaotic in the event of a National Register not being available. Without it there is a risk of the man who is essential to the success of the nation in war being taken from his proper place and put to a novel task. Such was the state of affairs in 1914 when men were still permitted to volunteer for service. What saved us in the earlier days of the Great War was the fact that our Allies held the greater part of the front of 400 odd miles from Switzerland to the Channel. Out of that frontage in 1914 and 1915 we occupied only a tiny strip while we were struggling to create and train an army which had no existence even on paper in peace-time.

This was the problem with which Lord Kitchener was faced in 1914. He had no National Register; he had very few trainers; everything was centred in the War Office: not even on paper had a plan for a national army been scribbled. Yet he realised as hardly anybody else did what our ultimate requirements would be, and he started to provide them.

Our essayists hope that something will now be done to work out some scheme of expansion on the lines named above, but I fear I should

be deceiving you if I pretended that their hope can be said to amount to an expectation.

In the early days of the war our statesmen—we call them “statesmen” in public but mere “politicians” in private—were at their wits’ ends. The serving soldiers were busy fighting. So Lord Kitchener was made Secretary of State and he set about expanding our forces. It is often asked why he created the New Armies? I think I can tell you some of his reasons.

First of all in those days the Territorial Force was enlisted to serve only in England. There were volunteers who said they would go abroad, but the enlistments were definitely for England, that is to say for home service and presumably war in Great Britain. Lord Kitchener knew that the Territorial Force of 1914 could only just train itself, but could not be expanded at the same time. And I would ask you—could it now train itself and expand at the same time? In 1914 there was no machinery for Territorial expansion, and I am not aware that we have any at the present moment. In 1914 the Territorial Force could not recruit hundreds of thousands of men, clothe them, feed them and house them; nor do I think it can now. In 1914 there was no plan for the expansion of our national forces beyond calling out a few regular reserves and mobilizing the Territorial Force. This is no exaggerated picture, and is only too familiar to you. But the one thing that has reconciled me to inflicting these hackneyed truths upon you is the hope that, by facing hard facts, some thought may be stimulated towards providing a scheme for a future war. To-day we can still lay our plans with recent knowledge and experience of what is required, but in a few years’ time, or in the dim future, when another war bursts upon us, you will all be taken aback and just as surprised as you were in 1914. We are being told by some that a League of Nations has banished war for ever. But do you believe it? Anyhow, whatever the future may bring, it is not only useful but imperative that some people should think clearly on this subject. Moreover, may I say that if we planned a bit more and thought seriously, it might be possible, without adding to the estimates of the Fighting Services in a perceptible degree, to produce a workable scheme. If we do not think about it we certainly shall not do so.

The rough consensus of opinion of the essays which I had the pleasure to read was in favour of expanding the existing divisions of the Regular and the Territorial Armies rather than of creating new and separate formations as in 1914. But they all make it a condition that forethought be expended upon the machinery of expansion and the provision of expert trainers. The winner of the Gold Medal¹ based his plan on a National Register and a decentralised administration. These crucial points were carefully put forward by him and there was no slipshod thought about his well-reasoned, methodical essay.

¹Major Cowper, King’s Own Royal Regiment, whose essay was published in the JOURNAL for May, 1925.

This rapid review concludes the first six points of my précis, all of which require statesmanship, because they deal with what we might achieve by means of planning and forethought based on our store of war experience. We have spent millions of money and have lost hundreds of thousands of lives to preserve our existence, but do we intend to hand on no amended plan to future generations? Not even a paper plan? The prevalent tendency among all classes and ranks is apparently to put the war on one side—even sometimes the memory of it—and then to shrug the shoulders at any mention of the possibility of another war.

Let us now turn to our last six points which deal with fitting the Territorial Army for its task of expansion.

It is difficult to obtain any help—or even sympathy—in discussing a possible war. There are no votes to be got by speaking about it; perhaps on the contrary, it might be possible to lose them by untimely allusions to it. Any statesman who studies military expansion ought to be a peer who need not think about a constituency, but can devote to the problem the forethought and care which Cardwell gave in the sixties to the reorganization of the Army. He will have to face unpopularity—we all have to do that sometimes—abuse and misunderstanding. If such be the case, I can only ask what a lecturer like myself can do here to-day? Really nothing beyond putting forward a few points and trusting they may bear a little fruit some day.

My plea at the very start is to aim at quality and spend our money on results. What I desire to emphasise is that it is not much use having a National Register and the framework of expansion, if the units which are to train the men to fight are not ready to receive them. The essence of training resides in the quality of the trainers. Moreover, it is vital that these trainers—I had experience of them in a new Division—should be able to set to work to teach the moment the war starts; consequently, they must be trainers accustomed to recruits. It is no use collecting a few thousand miners in a herd and then lecturing them on the strategy of Napoleon. It is inadvisable to embark on grandiose or extravagant schemes before starting in with what we already possess, and building thereon. Whatever we soldiers think desirable, there is no doubt that the country will hesitate to continue to spend 117 millions annually on National Defence.

I have had some little experience of the Territorial Army, having once commanded a Brigade in it. Recently I had three Territorial Divisions under me whose value I learnt to know pretty well. On the strength of this acquaintance I maintain that in our Territorial Army we possess fourteen of the cheapest Divisions of organized volunteers the world has ever seen or heard of. It is perfectly astounding to me what these men will do and how well they do it, in view of the time at their disposal. I know they are not all equally good, yet I think them wonderful and that a levelling up of the less good can be accomplished. But

with the disappearance of war-trained officers, the process will become increasingly difficult until the opportunity may slip for ever.

I would therefore suggest that the officers of the Regular Army appointed to command Territorial Brigades and Divisions, together with their staff officers and adjutants be selected with a definite object and peculiar care. In considering their qualifications these officers should be essentially a species of glorified company commander. This does not imply that they ever would be just commanding companies but that they be men who in the past have been good company or battery commanders and are capable of inspiring enthusiasm in battalion, company and battery commanders.

We must think more of the Territorial himself, particularly of the officer and non-commissioned officer, since it is upon them that the real burden of mobilization, not to speak of expansion, will fall. My experience was limited to the Divisions with which I had to deal, and I can safely say this about them. They will tackle any reasonable training exercise ; but they require encouragement ; they require inspiration. This cannot possibly be given to them by regular commanders who do not appreciate their difficulties and will not understand their point of view. They respond heartily to thoughtful enthusiasts, to instruction which is simple and sensible, and to orders which are issued after consultation and reflection—not orders which are issued first and discussed afterwards as to whether they are possible or not. Personally, I think that to sit in Whitehall and thence to issue orders to induce Territorial officers to pass examinations by fixed dates is not quite reasonable. ("Hear, hear.") Again I think that to appoint Brigadiers without considering whether their personality will inspire enthusiasm is a pity. Similarly to post adjutants who are merely looking out for a sedentary job, a quiet family life which will allow them to read for the Staff College, is a grave mistake. I would prefer successful "training cadre" commanders of whom there are plenty. Further, I think that N.C.O's. from the Regular Army who turn out to be unsuitable instructors in Territorial units should always be returned to their regular units. It ought to be made a rule to follow that practice which should not and does not necessarily spoil a soldier's career. A man may be a useful Regular non-commissioned officer but totally unfit to help in the instruction of men who only soldier for a few weeks each year. The authorities who can discover whether a man is really suitable or unsuitable for Territorial work are the commanding officers and brigadiers, and they ought to have power to return any candidate to duty at short notice.

In the next place I think that it is an error to refuse to print and to circulate leaflets or booklets relating to training methods and containing training tips, forgetting all the while that the Territorial Army officers have other occupations in life and can only devote a short time to soldiering and the study of official books. The training of the Territorial Army

should be done on quicker lines. We want short cuts and rapid methods—the inspiration of how “to get on with it.” If we would adopt this ideal and work it, a marvellous response from the men will be forthcoming, whereas punctilious insistence on doing things “by numbers” will elicit a half-hearted response, if any. The Territorial Army is essentially—and before all else—a human body, and should only be given human tasks and human ideals and human commanders.

The question of training leaders in the field follows the same reasoning. It has generally been supposed—I used to think so myself—that it is only possible to train leaders in the field by a tedious process of drill and lectures. But experience has shown that in the work of training leaders, that is to say, Section Commanders, Platoon and Company Commanders, a Territorial unit should start the work immediately after the annual camp, so that most of the training of the leaders can be finished before next year's outing. Wonderful results have been attained in battalions and batteries in which the superior commanders have utilised this method. On the contrary if it is not done we are not giving the Territorial Army a fair chance.

Another matter that requires thought is that of ceremonial parades and drills. I am a Regular soldier, brought up on strict drills, and favour them in the Regular Army occasionally; but I think they are unnecessary in Territorial units. When I see these drills going on hour after hour in fine weather in camp, I take it as a proof that the superior leadership which should inspire better things is just lacking. The fortnight in camp is all too short to waste on anything which can possibly be done in a drill-hall. Yet I myself and all others who have known the Territorial Army intimately on active service, are surprised to find that this good rule is constantly broken to-day.

I might further state that with regard to the difficult art of tactics Territorial units respond more readily to rational training methods than some of the Regular units of my acquaintance. Accordingly, I will summarise that part of the subject by suggesting that Brigade Commanders and Adjutants should be expert in the art of initiating and illustrating short cuts to tactics, not only in camp but during periods before the annual camp. In order to impress upon you that this is not mere imagination, and that it is not unpractical, I would like to add that I have on many occasions found Territorial Captains commanding companies, Territorial Commanding Officers and Territorial Brigadiers (Regulars) all training their units in a wonderful manner. During my period of command in the North I also had several Territorial officers in command of brigades, and I think that there is little harm in telling you this, namely, that out of some twenty Brigadiers in the whole Command there were two outstanding figures as trainers, and one of them was a Territorial. Personally I would like to see more Territorial officers who really do train their units promoted to the command of brigades: and I hope to hear some day that

one or other of these Brigadiers has been promoted to a Divisional Command. It will need care and thought, but I believe there are one or two who would do it extremely well. There is another point I would bring forward. It does not really belong to the points I started with and it is only a trifle; still, it appears to be sufficiently important to deserve mention. I allude to captains and subalterns at courses of instruction. There are many excellent courses open to these ranks. But take the case of an enthusiastic Territorial captain, thirsting to improve the training of his company, who is sent off to a course of instruction. Mind you, he also leaves his business, perhaps a lucrative business, in order that he may attend the course; he makes what to him is a big military effort in order to get there at all. It is a great pity that a man of that kind, maybe a war-experienced Territorial officer to boot, should at the course be made to spend hours in learning the parts of a rifle or a Lewis gun or a machine-gun, all of which belongs to a non-commissioned officer's job. Moreover, if he really wants to know them, he could learn them out of a book. I say that it is a pity to waste this man's time in such a way; just as it is a pity his time should be taken up with ceremonial drill when there is no time for such parades. As long as a unit possesses good march-discipline and can every now and then turn out a Guard of Honour, that is about all the ceremonial that is required. Territorial officers who go up for a fortnight's course should not spend a half or a quarter of their time on learning niceties which we admire in the Regular Army. It would be far better if the military horizon of such officers could be broadened. What they do want is that their military aptitude be cultivated by short cuts, especially in regard to minor tactics.

I will next refer to Territorial Associations. If the Territorial Army is to expand, there must be some machinery to manage this expansion. Now, I would very much like to know if it is your opinion and the opinion of thoughtful men, whether County Associations are competent to expand fourteen Divisions into something like thirty or forty or whatever the number is to be? I have had to deal with one Territorial Association which administered a whole Division, that is the West Riding of Yorkshire. In this case, the Association and the Division were compact and coincident, and this fact did simplify the whole business very much indeed, not only for me, but for all Territorial officers concerned with the recruiting, camp, clothing and the endless other matters requiring attention. It showed me the desirability for a single Association to be the administrator of one whole Division. But where a Division is administered by two or more Associations difficulties accumulate. I will mention an extreme case. Is it not a fact that the 4th Battalion of the King's Own Scottish Borderers, one Battalion, is split up between the Selkirk, the Roxburgh and the Berwick Associations? In London again, there is a Territorial Association administering something like a Division and a third, and so on.

No doubt the County Associations formed one of the chief planks of the original Territorial scheme, but I should like to ask you whether it is now considered that the County Association is still regarded as the best method to effect a war expansion on a national scale? If the Territorial Army is to expand, this question of administration is a most important one; the County Association must be the hinge on which the gate turns, and if it is to be the hinge of a huge gate, it ought to be strengthened in proportion. The Gold Medal Essay goes into the question closely, and rightly so.

Again, to go further down the scale of administration we must consider the task of the actual commanders of units and their share in the work of expansion. I cannot but feel that Brigadiers who have lately lost their Brigade Majors for the sake of economy are overwhelmed with masses of paper and up to their eyes in ink. They can have little time for serious administration. Are all these returns and reports truly necessary? I would really like to emphasise this question of the quantity of reports that seem to be perpetually required. To the uninitiated they seem almost excessive. Is it always realised what an immense amount of labour is involved in the compilation of reports if they are to be accurate or even worth reading? My object in bringing this matter into my lecture is to try and throw some light on the conditions under which the Territorial Army exists to-day; then to ask all our authorities how far this state of affairs is preparing our Territorial Divisions and County Associations for the task of expanding our forces in time of war. That is my one and only object. I will repeat a platitude: perhaps there are some—there may even be many—who believe there will never be another war. To my mind it appears absurd to suppose that the world has so greatly changed that there never can be war. To my way of thinking the only uncertainty lies in the date of that cataclysm and the peoples involved in it.

Have you not heard the parrot-cry:—"Let us get back to the things that existed before the war!" To me this seems wrong and impossible, because history never goes back. Similarly, the Territorial Army cannot go back to pre-war methods, or it will stagnate and this gives rise to the conclusion—at least I have come to that conclusion—that we are far from having visualised what is the ideal form which we would like the Territorial Army to assume. I believe it is capable of improvement, but that we have as yet failed to make out what we are aiming at. If indeed we are going to make the Territorial Army the basis of our future military expansion, then we ought to have some clear ideas as to what we desire that Army to be now. One ideal has been put forward for our Territorial Army, and it came from the pen of a poet, Rudyard Kipling. It is to be found in his little story called "The Army of a Dream." It may have been written in fun, yet it rests on a wonderful basis of reality and is animated by the right spirit.

Now let us return to something more definite and concrete. If we are going to expand our forces, and, if we are to train the expanded units for war, does it not seem to you that every private soldier in a Regular Infantry Battalion ought to be capable of commanding a section? If that is our ideal, then are we satisfied that everything is now being done to train him for that purpose? Once more let me ask: if we are to expand the Territorial Army, where are the trainers to come from? Are they to come from the Regular Army? Are they to come from the Territorial Army? Are they to come from much improved depots? Or, are they to come from all three? That is why I urge that a clearer policy for the future is requisite and an increase of N.C.O's. somewhere. Otherwise, I see no alternative but that the chaos which arose in 1914 will again be witnessed.

I will conclude by taking a concrete example and describing to you what is being done in a particular Territorial battalion. This battalion is the 5th Battalion of the North Staffordshire Regiment and although I shall quote it as my example, I may tell you that it is by no means a solitary specimen. By means of this illustration I trust I may show you what can be done in a Territorial unit, and thereby suggest what might be an universal model. Let us single out one company of this Battalion for my purpose. This company had a strength of 127 and went into camp last year for fifteen days 125 strong. But that is not all; for that is merely a computation. The whole Battalion had made a regular feature of outdoor training as against drill-hall training, the outdoor training being done on Sundays. The particular Company under review had done six Sundays in the country by means of charabancs and omnibuses before camp. Never less than 101 men of the Company turned out on the Sunday exercises. In addition, the Section leaders had all commanded their own Sections on these occasions. Special Sunday instruction previous to Camp had been received by all Section Commanders and 88 per cent. of them attended camp. Not a single recruit missed his musketry on the range, although this lies six miles from headquarters, and there were no failures. The officers had put in an average of 13 week-end outings for training and musketry. So far, about the Company; now I come to the Battalion. The Battalion had put in an average attendance of 85 per cent. of its strength on the same six Sunday outings, and the officers had done an average of 13 week-end outings during the year for training and musketry. There was no hutted camp except for musketry. The Section leaders of the whole Battalion had seven days' extra camp training under the Adjutant, and every man in the Battalion who was not a recruit was tried as a Section leader. The amount of latent talent discovered by making men command a Section was astonishing. The rate of promotion among non-commissioned officers of the Territorial Army is even worse than in the Regular Army; it is very slow indeed. In this particular Battalion it has taken some little time to overcome the difficulty, which was done by making appointments last for four years

only. This had had a wonderful effect on the spirit of the juniors, who soon found that there existed some real chance of rising to Sergeant instead of waiting for ten or fifteen years. So much for the concrete instance which illustrates my meaning and my ideal.

In conclusion, I would suggest that we consider more closely our modern methods of cheap locomotion—charabancs, electric trams and suburban railways—also that we study the question of establishing hutted camps instead of drill-halls. Let us visualise for a moment the modern drill-hall. What do we see there? On any busy evening the men arrive at about the same time. In one corner you will find recruits learning drill by numbers; in another corner the Lewis gun sections are being taught; and in yet another corner the signallers and machine-gunners are being shouted at simultaneously; all within a yard or two of each other. Is this the best form of instruction and the best conditions for imparting it with good results? Surely not. You cannot pay attention to a signalling instructor when a neighbouring squad of recruits is being bawled at to "Stand at ease."

There is yet another aspect of the case. At the present time recruiting for the Territorial Army depends upon the proximity of a drill-hall. A drill-hall cannot be found everywhere, so that in reality we take our recruits from the area around the drill-hall only. I therefore throw out the suggestion: why not substitute motor omnibuses and a hutted camp for brick and mortar drill-halls the next time a drill-hall is asked for? It might also be cheaper. At one time a regulation existed that soldiers must not travel in a charabanc, but I am suggesting that this method should be universally adopted and that the men be taken outside their towns by modern methods of progress whenever circumstances allow. For I am convinced that the training of the Territorial Army before camp should entail more tactics and more open-air work. And what is more the men prefer it.

With that, I beg to terminate these remarks. I apologise for the length of time I have taken in discussing matters which seem to wander beyond the compass of the twelve points I put before you at the beginning. My justification lies in the fact that the best hope of expanding our forces in the future seems to reside in devoting our thoughts and efforts to evolving a better system for the annual work and training of our units. The first step towards this end lies in improving the quality of the leadership in some Territorial formations by a levelling-up process to the best models. For it seems the inevitable conclusion, after reading these Gold Medal essays, that our future readiness for a big war will more and more depend on the war-preparedness of the Territorial Army, based upon a well thought out scheme for County Associations and a national register to facilitate expansion. It is therefore on these factors that must largely rest our capacity to produce armed forces in the hour of stress.

DISCUSSION.

TRAINING TERRITORIAL INFANTRY.

LIEUT.-COLONEL H. CLIVE, O.B.E. : I should like to support the remarks General Maxse made in regard to the possibilities of training Territorial Battalions. The picture he has drawn of attempting to train a battalion on pre-war methods on odd nights in drill-halls with isolated groups of men is perfectly correct. It is impossible to attempt to carry out any collective training while maintaining the organization of a Company with men who, by reason of their employment, cannot attend regularly.

The advent of charabanc training to which General Maxse referred came as a revelation to us, and, as far as my own battalion was concerned, completely revolutionised its training. There is no difficulty about finance. Provision is made in Appendix 18 of the Territorial Force Regulations by which on six company trainings a year 2½d. per man per mile may be drawn by the Association for this purpose. Sunday was the only day on which we were able to do the training, so that, if men came out for five or six hours, it was found necessary to buy them some form of ration. Here again our Association met us by providing us with 4/- per man, partly out of the savings from the travelling grant and partly out of the officers' out-of-pocket expenses, to which we ourselves were able to add 2/- which we allotted out of the profits made in camp on the dry and wet canteens. This gave us 6/-, which was 1/- per man per drill. I think that if a Company Commander can take out a hundred men for five hours at a time to a suitable training area, and if on six occasions in the year, five attendances are made compulsory to the man in order that he may earn the bounty, he is pretty well certain of getting a hundred men on parade. Any Territorial officer will support me when I say that half his difficulties have vanished.

But it is no good getting these men out to the training area unless the Company Commander has a detailed and carefully worked programme to work upon. To do that means a lot of spade work. He has to get hold of his subordinate leaders in the winter months; then, starting in February he must, by means of weekly lectures, go through the work that is going to be done during the year. He must go through "Section leading in attack and defence," paragraph by paragraph and chapter by chapter, and he must supplement that during the week by going through on the sand table in the drill-hall with his section leaders and his non-commissioned officers the work they will do on the following Sunday, having already, if possible, been out to view the ground and allotted the platoon areas. The result will be that when he gets his Company on to the training area, he can get to work straightaway; not only does he know what he is going to do, but his subordinate leaders know it also. In short it is the Company Commander's duty to train his Company. He is enabled to do this training by the initial help of the Adjutant and the permanent staff, whose rôle is to train recruits and to teach subordinate leaders how to instruct and how to lead. This they do by holding seven day courses at the beginning of the musketry season for training instructors in the rifle and light automatics. We also have a week-end course of lectures from an officer from the Command, from the general staff of the Division, our Brigadier and two training officers from the depot. We get about 100 officers and non-commissioned officers present, and we then try and propound a common doctrine of training for the year. Later in June we have a section leaders' class under the

Adjutant, in which they have seven days' training in the use of ground and section leading. I have never applied to the Division for pay for these men out of the training grant and been refused yet. Here, I should like to support General Maxse in his appeal for experienced Adjutants. I could not possibly do this work in my battalion without such help. You cannot carry on all these courses without an officer who is capable of organizing them. The position of an Adjutant is certainly no backwater in a live Territorial Battalion, and I go so far as to say that his tour of duty is not only the most interesting but probably the most instructive three years of his peace-time soldiering. The permanent staff instructor is in danger of losing promotion in his line battalion when he comes to the T.A.

Both Adjutants and permanent staff are in actual fact, by reason of the cost of living and housing difficulties, worse off financially when appointed to the T.A., and as the success of that Army depends so much on efficient instruction from this source, it is essential that it should be made sufficiently attractive to the Regular from the point of view both of finance and of promotion.

THE NEED FOR RESERVES.

BRIGADIER-GENERAL S. E. MASSY LLOYD: General Maxse has told us that he wants the Territorial Army to be expanded. My advice to you is that the old Militia should be reformed as soon as possible. When thinking of the last war I take off my hat to the Territorial Army; they raised 700,000 men. But what did the Special Reserve, now called the Militia, do? They raised and trained two and a quarter million men, and yet they have been abolished or are in a more or less moribund condition. I think the Government has made a great mistake in that respect. Our tiny Regular Army has no reserve whatever behind them, because the Cabinet have said that the Territorial Army will not be used for draft purposes; so that we have our tiny Regular Army without any reserve whatever. The country side is devoid of military training and the rough elements of the towns are not taken under the Territorial umbrella. I think that this is a pity because the rough elements of the town and the countryside contain some of the finest fighting material we have in this country.

LINKS BETWEEN CIVILIAN AND SOLDIER.

COLONEL JOHN BROWN: Two points that General Maxse made in his admirable address appealed to me because they embrace the same type of opinion which were expressed at a previous meeting held in this Institution, and dealing with the question of the connection between the soldier and the civilian. General Maxse wondered what the view of the people of the country may be with regard to the soldier and to the Army of the present day so far as the question of a future war is concerned. As one who goes up and down the country and is in touch with ex-Service men and large numbers of other people, I can assure Sir Ivor Maxse that the heart of this country is sound, and that there is a great feeling of admiration for the men that have been its fighting heads. You need only attend any public meeting to see that any man who may have served with distinction during the Great War will receive strong support when proposed for any office. You need only march your Territorial unit through the main street of the town with the band playing and you soon find that the hearts of the people are in the right place. One difficulty we have to face is in regard to the people who go up and down the country saying there will be no more war, that service in any branch of the military forces is wrong and an unchristianlike act, and that people ought not to wear the King's uniform. In

order to counteract that sort of thing the soldier must get amongst the people; the general public is only too willing to hear a soldier put his considered views before them, and they will heartily respond to his leadership. With regard to the question of a national war and universal service, I think the writers of the essays were quite right in considering that universal service would be one of the first essentials in a national war. The essayists dealt with the question of a national war, which means that the nation has got to support the Government before there can be the war. The population in general would not raise much objection to war, provided they thought that those who went soldiering were not going to be worse off through that soldiering than those who stayed at home in industry. (Hear, hear.) Therefore, if you want the nation to support the Army and the Government it will be necessary for it to be convinced that the men were to be treated fairly under some system of national service. You must remember that, so far as the Territorial is concerned, he joins because he wants to be treated seriously as a soldier. Through intelligent training and leadership he soon becomes remarkably efficient, and, where training is conducted on right lines, there will be no difficulty in getting the men to attend.

COLONEL SIR CHARLES YATE: I should like to support what was said by a previous speaker in regard to the importance of the Militia. It appears to me—and I have said so in Parliament and in other places—that it is far more important for us to have a Reserve for the Regular Army that is capable of going abroad for any rebellion or disturbance throughout the Empire without the need for further legislation than it is to have a Territorial Force which is only available in what the last speaker called a national war, when the whole manhood of the nation would be called out. We have been told that there is no likelihood of invasion for years to come, but we are always liable to have rebellions and disturbances in the various countries of the world at any time, and considering that we are supposed to have only one Division ready for immediate active service abroad, I think it is of very great importance that we should have a good reserve for the Regular Army. We must remember that 320,000 men were required to quell the Punjab rebellion and the Afghan invasion of 1919; the same sort of thing may happen at any time. Another point I should like to mention is the question which Sir Ivor Maxse raised in regard to the County Territorial Associations. He told us what a good thing it is that a whole Division should be under one County Territorial Association. As a rule each County Association will have only two Territorial infantry battalions to manage at the most. Consequently, if we are to have one whole Division under one Association there would have to be a collaboration of at least six different counties. I would like to ask Sir Ivor Maxse what he proposes to do in that respect. Would he propose that the Major-General commanding the Territorial Division should have delegates from each of these six or eight counties serving as a sort of super-County Territorial Association working with him, or what would he propose? That is a point on which I hope he will give us his opinion.

THE LECTURER'S REPLY.

GENERAL SIR IVOR MAXSE, in reply: Gentlemen,—I have nothing but thanks to offer to you, and will try to answer one or two of the points that have been raised. With regard to the question asked on the subject of the Militia, I would remind you that this point was only raised *en passant*; it is a big question in itself. I should like to thank General Massy Lloyd for the remarks he made with regard to the large number of reserves required for the Regular Army. They have not been

forgotten in the Gold Medal essay ; the plan put forward therein is to form reserve battalions at the depots. Colonel John Brown referred to the work of the British Legion and the heart of the country. We all hope that what he said is so ; we believe it to be so. But however great the heart of a country may be, just as it was in 1914—if there is a lack of forethought—how is that great heart to rise to the occasion to the best advantage ? Personally, I believe—I do not know whether you will agree with me—that half our casualties, and perhaps half our expenditure, was indirectly due to the total lack of a plan in 1914. Therefore, however great your heart may be, so much greater should be your foresight. General Sir Charles Yate raised the question of reserves for the Regular Army, whereas this lecture was about the Territorial Army. With regard to Territorial Associations the points I put forward in that respect were simply put forward for consideration. There is not the least doubt that, if you are going to cast on the Territorial Army the great burden of expanding in the manner suggested, the most careful plan must be elaborated and must be known to the Territorial Commanders as to how the task of expansion will be carried out. Moreover, whether you have a County Association, or an amalgamation of County Associations, the job has to be done in such a way that it will work in the quickest and simplest manner. It is simpler for one Association to deal with a single Division. There is also a further advantage. I do not want to be unkind, but I must be frank : it is this, the secretary is the mainstay of his Association ; and the kind of Secretary found in a small County Association cannot be compared for efficiency to the men gifted with organizing capacity who are found in London or in Associations where a whole Division is administered by one Association, and the pay is in accordance.

Another point dealt with the need of reserves for the Regular Army to be ready for small wars. Of course we must have a reserve for the Regular Army, but the reserve for the Regular Army would be too small for a national war. If you will read the Gold Medal essay you will find that the whole problem is there very carefully discussed from the point of view of filling up casualties in a national war. The answer to Sir Charles Yate's question is that this lecture did not contemplate any reduction in the Regular Reserve.

SIR CHARLES YATE : I was thinking not of a national war, but of the small expeditions with which we are continually faced.

THE CHAIRMAN.

THE CHAIRMAN (FIELD-MARSHAL SIR WILLIAM ROBERTSON) : Ladies and Gentlemen,—It now only remains for me to bring this meeting to a close. I shall not attempt to develop or in any way to improve upon the address to which we have listened, and which has covered such a great variety of subjects. In regard to organization, however, I may observe that it is, of course, a matter for which responsibility rests, and must rest, with the superior military authorities. But, as the lecturer has suggested, it is also one which should be carefully studied by all officers, and I think the more they study it the more difficult will they find it to be. The subject is also a matter of deep concern to everyone in the country. Some six years have gone by since the War Minister of the day announced that in future the Territorial Force would be the foundation of our army expansion in case of a national war, but not much progress in the erection of this military edifice is yet manifest. There are reasons for that, no doubt, but we cannot forget, and ought not to forget, that in the last war our preparations were woefully inadequate to the

situation. Three prominent statesmen, Mr. Asquith, Lord Grey, and Lord Haldane, have said in books which they have written since the war, that measures for compulsory military service could not possibly have been taken in the years immediately preceding 1914, and that if such measures could have been introduced they would have precipitated the war that it was our desire to prevent. In other words, we were too late in recognising what our requirements might be. It is to be hoped that the mistake will not be repeated in future.

It has been a pleasure to me to preside at this lecture. Sir Ivor Maxse has said that he wished to give us something to think about, and he has certainly succeeded. In your name it remains for me to thank him for the interesting and instructive address that he has given.

The resolution of thanks was carried by acclamation.

On the motion of Lieut.-General Sir Noel Birch, a hearty vote of thanks was accorded to Field-Marshal Sir William Robertson for presiding, and the meeting terminated.

ARMY TRAINING: THE REGIMENTAL OFFICER'S POINT OF VIEW

By LIEUT.-COLONEL R. M. RAYNSFORD, D.S.O.

TOWARDS the close of the year two types of criticism on the past season's Army Training normally appear. The first emanate from the military correspondents of the daily press, who sum up their experiences in truly journalistic phraseology, without contributing many constructive suggestions of advantage to the Army. There exist one or two exceptions to this rule, but it is well not to make invidious distinctions. The second class of remarks are issued by the General Officers in command of the troops; these are headed "For Official Use only," and usually conclude with many expressions of satisfaction at the high standard of efficiency attained by all ranks. These compliments may be tempered by a modicum of discreet criticisms and gilded pills.

The views of the regimental officer, the man who really matters, are seldom heard, except in the ante-room, and so rarely find their way into print. Yet it is impossible to avoid feeling that these views must possess a certain value and at any rate deserve some kind of hearing, even if only to dispel erroneous impressions. It is with this idea in view that the following observations have been set down as representing the general feelings entertained in an average officers' mess of an infantry battalion.

Taking the broad view, it is generally agreed that 1926 has been a good year from the point of view of training. There have been no Army Manœuvres it is true, yet that—in some respects—is all for the best. In 1926 a good spirit has prevailed throughout all ranks. Inter-Service jealousies are dying down and instead of that universal desire to dismember the Air Force, which tended to split the Services, there is beginning to manifest itself a wish to establish a good working partnership. A real effort was made to get to know more about each other, to work more closely together, if only the opportunity were afforded. In this respect the announcement of the constitution of the Imperial Defence College, especially in view of the qualifications of its commandant and staff, has been greeted as being of exceedingly good augury.

In the Army, for the first time since the war, there has come a realisation that revolutionary changes are not only on their way, but

have come to stay, changes that will mean an almost incredible improvement in the efficiency and comfort of officers and men.

Mechanicalized field artillery batteries have unquestionably proved their worth and have gained the unstinted confidence of the personnel who operate them; anti-aircraft artillery brigades, divisional trains, and divisional ammunition companies have been mechanicalized with apparently complete success.

A selected battalion has been experimenting during the past season with semi-track cross-country vehicles, obviously a vast improvement over the normal horse or mule transport. Specially good work was achieved by the R.A.S.C. with the new Morris six-wheel lorries, with track attachment—an admirable and quite inexpensive vehicle—in the matter of bringing along hot meals in containers during divisional training. In short, “motors and mobility” is the slogan. It is on all fours with civil life. Just as the civilian can scarcely imagine how he existed without a car, so infantry battalions of the future will be voicing the same belief. But alas! these changes are always slow to mature—all too slow. It cannot be said that this is on account of reactionary influence from on high, since the General Staff of to-day is almost entirely modernist and eager for change, though admittedly there remains, so it seems, some palpable conservatism of outlook in certain places. For something seems to stand in the way of more rapid progress in mechanicalization. It is all terribly disheartening for the regimental officer. The latter, with the lessons of the Great War before him, considers it extraordinarily unfair that the infantry, which still has to bear the brunt of the attack, should not receive the best equipment and the best training—that, too, on the best ground available. He thinks that modern training can only be effectively imparted if the troops are conveyed to some often distant, but new, training grounds by motor traction; that modern training, to be thoroughly effective, should be given to the men when they are fresh in mind and body. Our Higher Command can scarcely realise how wearisome it is for, say, a platoon commander to carry out an exercise on ground close by which is not only utterly unsuitable to the exercise in question, but of which he knows practically every blade of grass by sight. If it be a question of finance, since the military budget is already excessive, there is only one way out of the difficulty, a reduction of the peace establishment of the regular infantry. After all what could be the objection to this step?

The value of Territorial troops has been thoroughly proved this year, and there is little doubt that they are on an upward curve, both in strength and efficiency. The Air Force has shown what can be done in the way of police duties in Iraq by a combination of aeroplanes and armoured cars, and there is reason to hope that the experiment may be extended in moderation to India as well—to the relief of the regular infantry. No regimental officer would dream of suggesting the reduction

of any further regiments, but a great number of them do emphatically consider that a battalion consisting of three, or even two, companies with a headquarter wing, together with sufficient motor transport under an attached R.A.S.C. subaltern, would prove a far more practical and valuable unit than the present unsatisfactory assemblage of men, horses and wagons. Moreover, the present battalion, when on the line of march, is either unduly vulnerable from the air or else, if considerable intervals are maintained between platoons, is extravagantly elongated. The large battalion of to-day with its obsolete horse or mule transport is in fact a cumbersome weapon, which in the next "great" war will be annihilated or scrapped as impracticable. That is how nearly every other regimental officer now looks at the matter.

The question of co-operation is now receiving much attention in high quarters. How does it strike the battalion officer? He believes that, as between Services, there is little to criticize. There appears to be taking place a constant exchange of ideas between Camberley and Andover, and, generally during Brigade and Divisional Training, the efficiency and eagerness to help displayed by Air Force officers is very noticeable. When, however, there is any question of co-operation between the various branches of the Army, the question assumes a very different aspect, at any rate during the early stages of the training year. During the last three years the occasions when the writer's unit saw cavalry at work numbers six—and two of those years were spent at Aldershot. At other stations there is usually no cavalry regiment. Yet if motor transport were available there are many places where some kind of joint exercise could be arranged. The writer has in mind his former station, Shorncliffe, which lies but twelve miles distant from the Cavalry Depot of Canterbury. There arises a vivid recollection of a practical examination for promotion at Shorncliffe in which scarcely one of the candidates had the vaguest idea of what a cavalry patrol looked like or how it worked in the field. It is, of course, very easy to maintain that the commanding officer is to blame for this state of affairs. It is his task, of course, to instruct his officers as to the characteristics of the other arms. Should he fail to do so—in theory at least—he may expect to be immediately removed from his command. But how can he be blamed, when it is only what the eye sees that becomes really fixed in the memory. So the organization of a few small advanced or rear guard schemes involving, say, a cavalry troop, a battery, a couple of companies and—is it possible to murmur as much—a section of tanks on either side might yield invaluable results. Given motor traction for the infantry, such exercises could be carried out by the divisions at any time of the year. As it is, the opportunity for such schemes are practically non-existent, so for purposes of co-operation, recourse is had to the ambitious schemes that are held at the end of the training year. Is this not a clear case of running before we can walk?

Co-operation between infantry and artillery is, to a certain extent, in a more healthy condition. Field batteries are now affiliated to battalions, but not much is seen of them by the infantry until the time for brigade training arrives. Sections of pack batteries are nearly always allotted to battalions during battalion training. Infantry field officers are occasionally asked to give batteries at Larkhill or at other centres a form of exercise which appears to the infantryman to possess little practical value. Can it truthfully be said that the problem of efficient artillery support for infantry in moving warfare during the early stages of the attack has yet been solved? Yet it is absolutely imperative for the salvation of our slender resources in infantry that this should be done and done effectually. To the regimental officer the present state of this crucial question appears to resolve itself into one of two alternatives, either there is worked out a carefully timed artillery programme which for its success is dependent on the enemy doing exactly what he is expected to do—and the enemy is often distressingly unwilling to conform to our wishes—or else we have to rely, apart from aircraft information, on a perfect and rapid inter-communication between forward infantry, F.O.O's. and batteries, which—in practice—it is only too obvious has never been attained. Is it not possible to arrive at some solution of this problem by the formation of an experimental mixed brigade, which should be given a free hand in a suitable area, adequate funds and supported by requisite scientific civilian assistance? If this be not a practical proposition, why can it not be treated as a purely technical military problem and some system devised which will give far more satisfactory results than is the case to-day? Instead of some arrangement of this kind we now have rather formal divisional signal exercises, lasting two or three days, in which various tentative and elementary efforts are solemnly “tried out.” By the regimental officer the results are generally regarded as meagre and unsatisfactory, while—more important still—they fail to inspire confidence.

The use of smoke is a cognate subject, obviously possessing enormous potentialities as regards the safeguarding of infantry. Yet, eight years after the Great War, we are still very much in the experimental stage. Nor, as far as can be seen by the battalions, do we appear to be getting any nearer to a really satisfactory gun for the close support of infantry.

Of course the regimental officer is regarded as prejudiced, but he cannot help feeling a sense of complete astonishment at the complacency with which, apparently, the fate of the unfortunate infantry in the next war is regarded. Is he, indeed, thus to be offered up wholesale on the altar of “wait and see”? To him it would seem preferable to allow almost everything else to go by the board, training grants, demonstrations, inspections and all the rest of it, provided that these mechanical and scientific problems were solved. The infantry officer of to-day does

not forget that there were 800,000 casualties at Passchendael alone, of which the vast majority were foot soldiers. And he also thinks a bit more than he did in 1914. What is being done to inspire him with the necessary degree of confidence that the infantry is not going to be sacrificed on that scale again? Why this delay in holding experiments? Why this secrecy? Why this parsimony? Why this hesitation in providing the material? Such are the thoughts that are common to very many infantry officers.

So we come to the question of tanks and the co-operation of infantry with tanks. There now appears to be a tendency to decry tanks, to regard them as being intensely "blind," and to compare them satirically to "knights with their visors down." It may be so. But the regimental officer can still see no possibility of his company being able to cross the last 500 yards of *open level country* against machine guns well placed in position. Nearly every action of the Great War goes to prove this opinion to be correct. In close, intersected, wooded country, where infantry can "infiltrate," it is quite another matter. But obviously an enemy will do his utmost to select positions from which he has a good field of fire. The inevitable answer to the conundrum will be "fire and movement." But we have heard so much of it, and we still believe that, during the crossing of that last 500 yards of open level country, the forward rifle sections will inevitably mask the fire of their supporting Lewis gun sections. Despite the known powers of modern machine guns, in defence, we still see on almost any summer day on our training areas attenuated rifle sections assaulting over the open with the utmost gallantry some intensely strong position. No wonder that a distinguished critic seeing such a display—after a long absence from our training grounds—could groan aloud over this tragic folly! No wonder that the infantryman, as he sees it, considers that he is being trained to be exterminated in the next war at the cost of great gallantry! Yet this is where the sting comes: he feels that in 99 cases out of 100 the sacrifice may be made without achieving any tangible result.

At any rate, for the sake of humanity, it would seem to be our first duty to perfect the tank, so far, at least, that it will save the infantry all unnecessary loss. Next let us aim at the closest co-operation between infantry and tanks. Then, if prohibitive costs stand in the way of the tanks being sent to all infantry stations, let us send the infantry in their motor vehicles to those places where they can co-operate with the tanks. This might mean giving up a few days platoon or company training, but as these exercises usually resolve themselves into practising impossible attacks, it may prove more than a profitable exchange.

It may seem somewhat venturesome to reproduce the regimental officers' views on our higher leadership in war, yet looking back it cannot be said that this country produced great military leaders in profusion. It is curious, therefore, now-a-days to observe the extraordinary tendency,

not to practise leadership, but to delegate command to subordinates. This arises apparently from the comforting idea that in the next war every officer of the Regular Army will be at once promoted one if not more steps in rank. So the battalion commander may hope to command a brigade, the brigade commander a division, and so on. Nevertheless this habit of thought anticipates a war of the first magnitude, such as—for the moment at any rate—is extremely unlikely. It further anticipates the raising of vast formations of infantry—which we may never see! The old school may delight in “visualising” serried lines of army corps, oblivious of the fact that the younger school—that is the regimental officer of the present day—assuredly and most resolutely might discredit their employment, let alone their creation. A “small” war is to-day far more probable; here everybody—at any rate to start with will have to do his own job in his proper rank. Yet now-a-days, during battalion training, the battalion commander nearly always acts as director, while he makes his majors command the battalion; the brigade commander, in turn, will do the same with his battalion commanders, while the number of times a divisional commander actually commands his division during his four year term of office can easily be numbered on the fingers of one hand. It is far more pleasant and still more easy to play the part of a director than of a commander; to journey to the scene of operations an hour later in a car; to watch the proceedings from a comfortable point of vantage; finally to make some profound criticisms which subordinates are scarcely ever in a position to refute. But this method does not exercise, nor does it tend to create, that elusive gift of leadership among more senior officers. This “director” practice is exaggerated and is, moreover, breeding a wrong spirit. It would be much more profitable to match small mixed forces against each other throughout the training season, with outside directors and umpires especially brought into the exercise for the occasion. This might entail the relegation of small unit training, sections, platoon and their equivalents, to the individual training season. That, of course, opens up a controversial subject, too long for present discussion. The situation is best summed up in the words of the regimental officer: “An extraordinary amount of time is spent by the higher command in ‘worrying’ about section leading and similar details, and an extraordinary little time upon higher leadership.”

During brigade and divisional training the regimental officer who takes part in them sees so very little of the business that he has few opinions about the conduct of these exercises, still less about their value. His views being so circumscribed, it is scarcely necessary to dilate upon them. It may, however, be legitimate to conclude with a few remarks as to what the regimental officer's opinion of Aldershot may be. Aldershot takes pride of place among our training centres. It possesses many unique facilities for devising exercises that should satisfy the lesser lights, while there are present so many prominent soldiers among its commanders that

it ought easily to rank as an ideal training centre for the great ones of the Army. Yet somehow in the opinion of regimental officers, it fails to do so. The tense atmosphere engendered by the competitive spirit pervading the whole command detracts greatly from the value of the work done by the troops and the instruction imparted there. Constant supervision, the struggle to attain perfection in every detail, leads to a myopia which ends in an incapacity to differentiate between the essential and non-essential. Aldershot is perhaps too large and too concentrated; it takes itself far too seriously. There is too much "war" in the air. It is a pity. But the future outlook is at bottom bright. Inhumanity is perhaps a product of the Great War; that will wear off in time. Something requires to be sloughed off. Indeed all that Aldershot needs is some more of the human touch. From all accounts that is precisely what the new Chief of the Imperial General Staff is attempting to infuse into this and into all our other training problems.

ON WRITING APPRECIATIONS

By MAJOR H. G. EADY, M.C., R.E., p.s.c.

"I knew that, in putting the science of war into practice, it was necessary that its main tenets should form, so to speak, part of one's flesh and blood. In war, there is little time to think, and the right thing to do must come like a flash—it must present itself to the mind as perfectly obvious." So wrote Lord French in "1914." Now, nothing will appear obvious to the human mind or eye unless the owner has been trained in a very definite method of recognition of salient points and in the automatic employment of a mental machinery for arriving at a quick, reasoned, decision. The requisite training will be found in the art of appreciation.

The writing of an appreciation is looked upon by many with despair as a strange and difficult mystery, chiefly designed by examiners for the purpose of defeating candidates and requiring many years of study to master. This belief is mainly founded on the fact that the art of writing appreciations is usually taught as a separate subject; it is, in consequence, divorced from the ordinary routine of life. Yet an appreciation is simply nothing more than the logical process of thought undergone every time one makes a decision in normal life. To the ordinary person, this process in everyday life is practically automatic and unconscious. It is only when we come to make a definite study of the so-called art of appreciation, that we realise that, like the famous M. Jourdain in Molière's "Le Bourgeois Gentilhomme" with his study of prose, we have used it all our lives.

In one of the most common of the day's actions—the crossing of a London street—the process is almost complete. Here, you have a *clear and definite object*: like the proverbial chicken, you want to get to the other side of the road—and unconsciously you complete an appreciation before you undertake the task, which is rendered hazardous by an active, destructive enemy. Many factors are considered and sorted out. *The time and space factor*—the relative speed of yourself and the vehicles; *the climatic conditions*—is it raining, and, if so, will your morale or condition be reduced if you wait for a time, or will the rain affect the surface so as to make rapid movement difficult? *The condition of your own force*—are you ready for a sprint, if the opportunity offers, or to jump clear if things go wrong? *Your own plans*, will you cross where you are, or move so as to get to an island, and thus make two operations to achieve your

object? *The plans of the enemy*—is this traffic likely to be accelerating at this point or going slower and what chances are there of the services of an ally as personified by a neighbouring traffic policeman, completely holding up your enemy so that you can achieve your object without opposition? All these and possibly other factors are unconsciously considered and sorted out, and a reasoned decision reached. That is because you are that supreme creation—thinking man! It is that lower creation—unreasoning female—which forms the bulk of the Pedestrians' Suicide Club, because she knows not, consciously or unconsciously, the art of appreciation!

The appreciation is, then, the logical process of thought by which one arrives at a definite decision after considering the various factors which could possibly affect that decision. In everyday actions, this appreciation is based on an almost automatic process, and it should be so in war or training for war. The main difference between the two is that in the latter case, one must be able to make the process a conscious one, so that one can record it for the benefit of others.

Appreciations will range from those prepared deliberately for war on the largest scale, appreciations leading up to plans such as that of von Schlieffen for the invasion of France, which may have to take into consideration factors such as the stability of the constitution of the countries concerned, the national temperaments, their powers of production, and all the innumerable factors of civil as well as military life which bear on modern war—to those made rapidly and mentally by the most junior commanders. These varieties, must, of course, differ in scope, but should not do so in method. Normally, most officers will only have to deal with appreciations of a comparatively limited nature, and in consequence the written appreciation of a tactical situation only will be considered here, though, as has been said, the process is the same for all types.

To begin with, one must decide on the form in which this appreciation should be prepared. In all the Services, it has been agreed that the actual form is not of primary importance: an appreciation is a person's own process of thought, which will differ with individuals: but, in order to ensure a logical sequence in the consideration of the problems, and to enable a superior or subordinate, who has to take action on the appreciation, to grasp quickly the intentions of the writer by reason of the fact that the writer places before him the problem in a manner to which he is accustomed, the manuals of the three Services advise (in the case of the Army, they order) a definite sequence in which factors affecting the problem should be considered. Unfortunately, up to the present, this sequence differs among the Services. The army authorities consider that the general headings and the necessary sequence are:—

- (1) The Object;
- (2) Considerations which affect the attainment of this object;

- (3) Courses open to the two sides ;
- (4) The Plan.

The Navy and the R.A.F., however, prefer to take item (2) first. They consider that one should review the existing situation—i.e., the present—before discussing the object, i.e., the future. The rate at which the situation may be changing and the vast area of manoeuvre make the object more difficult to define and more dependent on the various factors. The army view, on the contrary, is that “unless the object is clearly stated in the opening paragraph, the appreciation is apt to become involved and the decision—which is the aim and object of all appreciations—shrouded in doubt.” If the object is not clearly defined at the beginning, time may be wasted and confusion introduced by the study of innumerable factors which have no bearing on the object in view. The object, it is argued, must dominate the situation, and not the situation the object. Actually, the rate of change of the situation and the vastness of the area of manoeuvre should not affect the object, but only the method of obtaining that object.

The real divergence in opinion would appear to be in the interpretation of the word—object, and in the naval and R.A.F. method, it seems to the present writer, that there is considerable danger of the “object” being confused with the “objective”¹ or with the method of attainment of the object. From the military point of view, the object can always be clearly defined, and it would appear that this could be the same for all the Services. There is no doubt that the military appreciation includes more complex and varying factors than that of the Navy and R.A.F., and military experience has shown very clearly the importance of this statement of the object at the beginning of the appreciation. It is understood, however, that this question is now being discussed between the three Services, and that a universal procedure will be evolved later on. There is, at any rate, no doubt that for the essentially close co-operation of the three, a common doctrine and staff procedure are vital.

It is quite impossible to discuss here details of a procedure applicable to all three Services, as the factors involved in each case will obviously differ widely. The system of tackling the problem is, however, it is suggested, the same in all cases, and though the following remarks deal only with military factors, the procedure may be of use to officers of the other Services as well.

As stated previously, the military manual (Training and Manoeuvre Regulations) has now definitely laid down the order, in a general way, in which the factors affecting the problem should be discussed, and it is proposed to amplify the four headings of the Regulations so as to get a logical process of thought leading up to a reasoned decision.

¹The difference between the *object* and the *objective* is not always clearly understood. Again using the illustration of the “proverbial chicken”—its *object* is “to cross the road”; its *objective* is “the other side.”

Keeping to the sequence of the headings as laid down, it is suggested that the following provides a logical method of looking at most tactical problems :—

- (1) Get your object clear in your mind.
- (2) Form a clear picture of the situation as it is at the moment ; then note all the various factors which *may* affect operations, and *how* they will affect them.
- (3) Outline the courses open to you for the attainment of your object ; consider the possible course of action open to the enemy and how these may affect your courses.
- (4) Taking all these points into consideration, show the advantages and disadvantages of your own various courses, select the one you think the most suitable, and say why you consider the one chosen should be adopted.
- (5) Finally, state clearly and concisely the Plan in sufficient detail to enable someone else to write the detailed orders to put it into execution.

Now, let us consider this appreciation in more detail. Firstly, the *Object*. As already stated, it is suggested that it is best to consider this at once, and to keep it very much to the fore in our mind throughout, so that we will not be led astray into considering matters which have no bearing on what we are seeking to achieve. This object, then, must be absolutely clear, simple, and single, especially the last. There is nothing so likely to produce a muddled appreciation as a complicated object. It can always be reduced to one definite thing. For example, in the final break through in Palestine, Allenby's object was the destruction of the Turkish forces, not the deception of the Turks, the break through in the coastal plain, the passage of the cavalry through the gap, and the surrounding of the Turkish forces. All these were means to the end. Or, again, consider the German advance in 1914. What was their object ? It was never clearly defined in Moltke's mind, with the result that the co-ordination and control of the force were lost, and failure followed.

So we must keep the object single and definite, and we must be absolutely clear as to the difference between our object and our objectives. The latter are merely the tactical features, the occupation, or destruction of which will help us to achieve our object. We may have many objectives during our projected operation, but we have only one single object.

Having decided on the object, it is suggested that we should get a picture of the existing situation. We want to know, for ourselves and the enemy :—" What we are," " How we are," and " Where we are."

What we are. We must know the relative strengths of the opposing forces, and this often creates a difficulty. How should we express this, and in what detail ? The answer must obviously vary with the type of problem, but we can get our parallel from a sporting appreciation. If we

are going to compare two boxers, we probably give their respective weight, height, reach, and, possibly, age. The detailed measurements of their biceps, thighs, necks, etc., are of little interest from the point of view of obtaining a fighting comparison. Similarly, if we want to get a picture of the relative strength for fighting purposes of the two forces, we only want a comparison of those parts which will directly affect the issue, i.e., rifles, automatics, guns, tanks, armoured cars, cavalry, and we get the best picture of all if we can give our estimate by simply giving the enemy's strength as some definite ratio of our own, stressing, if necessary, the situation as regards any one arm or service which is likely to play a predominant part in the operations.

This gives us "What we are." This is of little value, however, unless we know "*How we are*," that is to say, what are the efficiency and morale of the forces, factors which will obviously affect the general consideration of relative strengths.

Then *Where we are*. We must get the positions of the two forces in sufficient detail for the particular problem we have in hand.

We have now got our object, and the situation as it is, and we turn to the factors which will affect our future operations. These are innumerable, and will obviously vary with the type of problem: but it is suggested that they should be considered in some definite method. The idea of the writer is to jot down on a piece of paper every factor that we consider may have any bearing as it comes into our head: then to sort them all out, and place them in groups in logical order. We must give the factors, and more important still, the deductions to be derived from them. The following example shows how the problem can be tackled. Most problems entail movement of troops, vehicles, etc. Movement means the consideration of all the movement facilities of the area, roads, tracks, railways, facilities for cross-country transport, etc. Possibly this movement may have to be secret—is there cover from air observation, or will the movement have to be carried out by night? In the latter case, what are the hours of darkness? Then the movement entails calculations of time and space. We must consider the time factor, the relative speed of the forces, etc. On the speed of the forces, the movement facilities, and the cover from air may depend the positions of assembly areas. All these factors will probably again depend on weather conditions. Then, again, movement is useless unless the force moved can live, so we are automatically led on to the considerations of the administrative factors affecting the situation.

In other words, if we develop a regular method of putting down the factors, or even any one main factor affecting the problem, our brain is lead almost automatically from the consideration of that one to consideration of the next, as all the factors are really inter-dependent. We must, however, keep the object perpetually in mind and beware of being led on to the consideration of factors which are irrelevant to the issue.

Moreover, we must be sure that we are producing definite deductions and not just tabulating factors.

So much for the factors affecting the situation. We now have to consider the *Courses open to us to gain our object*. Unless we are confronted with a situation in which the enemy has definitely gained the initiative, it is always wiser to consider our own courses of action before those of the enemy, so as not to be influenced by the latter's possible actions. Sometimes, of course, we are forced to base our plan purely on the likely moves of the enemy. On the eve of the battle of Waterloo, it is recorded, Lord Uxbridge, commanding the cavalry, went to the Duke of Wellington in order to learn what his plans and calculations were for the morrow, because, as he explained, he might suddenly find himself Commander-in-Chief, and would be unable to frame new plans at a critical moment. The Duke listened quietly, and then said: "Who will attack the first to-morrow, I or Buonaparte?" "Buonaparte," replied Lord Uxbridge. "Well," continued the Duke, "Buonaparte has not given me any idea of his projects: and as my plans will depend on his, how can you expect me to tell you what mine are."

Normally, however, we should consider our own courses of action before those of the enemy. In stating our alternative courses, it is only necessary to outline clearly the idea—just enough to form a skeleton on which to hang the various factors already discussed and which will enable us to pick out the essential weaknesses and strengths of the various courses. We must be simple and clear, and confine ourselves severely to those lines of action which are really feasible. It is fatal to produce a host of proposals, like Aunt Sallies, just for the pleasure of showing their utter worthlessness by further brilliant argument. There is a somewhat prevalent impression that, in an appreciation in an examination, one ought to produce three alternative schemes. This is a dangerous fetish. Produce fifty if there are really fifty possible ones, but no more than one if you definitely consider that it is the only one, so long as your explanation of the factors and of your choice is clear and conclusive.

Next, we must consider, in the same way, the *Possible courses of action of the enemy*, and, in doing so, must give them the benefit of having someone in command equally gifted and sound as ourselves. We must not, however, allow ourselves to be influenced by the schemes we have already evolved for our own side; on the other hand, it is quite useless to review the potential actions of the enemy, unless we show what will be their effect on those schemes.

We now get to the only really difficult part of the appreciation—the choice of a *Plan* for our own side. It is suggested that the best way in which to tackle this is to put each of our possible courses of action down in turn, with its advantages and disadvantages, and the way in which it will be affected by the various factors previously considered and by the possible actions of the enemy. When this has been done, it should

be fairly evident which is the best course to adopt. Anyhow, we must make our decision, and state clearly and briefly our reasons for adopting this particular course in preference to the others.

Finally, we must produce the chosen plan in such detail that orders for its execution can be prepared. The simplest method of deciding how much is required in this paragraph is to put ourselves in the place of the man who will have to write the orders—what would he want to know? The answer to this will give us an idea of the amount of detail required.

There is one other matter of great importance—the form in which the appreciation should be written. It is again impossible to lay down hard and fast rules, but, for the beginner, the writer suggests that everything is simplified if clear headings are inserted throughout the appreciation. One must beware of splitting it up too much into paragraphs, so that it becomes disconnected, but there is no doubt that clear, definite headings to the points being discussed help the writer himself to keep to those points and to avoid the omission of important factors; they also help the reader by enabling him to pick out at once the points on which he wishes information.

Finally, be brief and to the point, and keep the language and style simple. General Buller, in the early part of the South African War, opened his official appreciation of the situation as follows: "Ever since I have been here we have been like the man, who, with a long day's work before him, overslept himself, and so was late for everything all day." In another official appreciation to Lord Roberts, he wrote: "If I could have had my own way on arrival, I should have pushed through to Bethulie to Bloemfontein, but the fat was in the fire before I got out. Kimberley, I believe, will be saved. Ladysmith is a terrible nut to crack, but I hope it will." His style was certainly his own, and simple, but is not one to be copied, at any rate, from an examination point of view! As a matter of fact, his failures were largely due to his lack of power of appreciation.

As has already been said, the art of writing military appreciations can only be learned by constant practice, and by practice along definite lines. If one of the main characteristics of a successful appreciation, speed, is to be attained, the mental process must be almost automatic. One must be able to give all one's time to the consideration of the various factors concerned, and not have to worry about the method by which one is going to sort out those factors. Some general logical form of tackling the problem is, therefore, essential, though the form may be left to the taste of the individual; but it is suggested that, once some logical process which suits the individual has been evolved, all his appreciations should be built up on that general foundation.

One of the great difficulties in studying this question is that of finding any models which have been actually produced in war with

successful results. It is true that the old Prussian general, Verdy du Vernois, exclaimed, when his staff was trying to find some historical parallel which would give a clue to probable future action: "Let history and principles go to the devil! After all, what is the problem?" At the same time, there is no doubt that great value can be obtained from the reports, appreciations, and orders of some of the past leaders, so as to get clarity and simplicity of expression, or to see how loose wording or faulty appreciation has brought disaster. If one reads the appreciations written by Wellington while in India, his memoranda from the Peninsula, or his appreciation before the campaign of Waterloo, one cannot help being struck by the amazing clarity of his methods and his language, and his very decisive way of building up his arguments. It was the result of a life's training. At Salamanca, he seems to have appreciated the situation with all its possibilities in, literally, one glance: his orders were written on a torn scrap of paper: and "forty thousand men were defeated in forty minutes."

It is interesting to compare him with Napoleon. Unless the latter had Berthier alongside of him, things nearly always went wrong in some way or another, because Napoleon could not put down on paper his plans and intentions so that others could write the orders. Berthier alone could really read between the lines, and when one reads Napoleon's instructions to Berthier for the concentration before Jena, one can easily realise the difficulty of the normal man in understanding what he really wanted. Yet perhaps the most remarkable case of appreciation was that of Napoleon some time before Austerlitz. In his advance northward before the battle, he had appreciated in his own mind exactly what the course of operations would be, stated that there would be a big battle on the actual ground where the engagement was afterwards fought, and foretold precisely the details and outcome of the fight. His appreciation here was as good as that in Russia in 1812 was bad. There is another very interesting account of his powers of appreciation given in the discussion of the campaign of Marengo in de Bourienne's Memoirs.

Throughout history, from the time of Pharaoh's miscalculations at the Red Sea to the last war, one can see the disastrous results of faulty appreciation. The Walcheren Expedition, the First Burmese War, Buller's campaign in South Africa, the Russian campaign in Manchuria, the first advance on Baghdad—to take a few cases at random—all failed owing to faulty appreciations. In the South African War, one saw this failure most vividly. Buller, on the line of the Tugela, was producing new appreciations almost daily, none of which seemed to lead him to any really definite decision. Kuropatkin, in the Russo-Japanese war, was even worse. He never appeared to have attempted to appreciate the situation, with the result that he never came to any decision. His orders to Stachelberg on 9th June for the latter's advance towards Port Arthur are classic examples of lack of plan due to lack of appreciation. Finally,

the campaign in Mesopotamia provides the best example of the results of a plan of campaign being forced on to a commander by people incapable of appreciating a situation from a military point of view.

The more one looks at historical examples of great campaigns or battles, the more is the importance of this power of rapid, coherent, and concise appreciation emphasised. One of the chief attributes of a great commander is always said to be that of rapidity of decision, but, in fact, that is a mistaken idea. Anyone can make *a* decision quickly; it is the ability to make a *reasoned* decision quickly, based on all the factors concerned, that is the hall-mark of the great commander. A gushing lady, sitting next to the old Lord Salisbury at dinner one night, said to him: "Aren't you overburdened with the weight of responsibility for all the decisions you have to make?"; and Lord Salisbury, in his brusque manner, replied: "There is no weight of responsibility in making decisions; the responsibility lies in being sure of your facts." The true qualities of a great commander can be acquired only by constant practice.

Interesting and rather amusing ways of doing this are to analyse occasionally the pros and cons of different plans which one has automatically considered in some quite simple action in ordinary life; to create military situations for oneself on any map, and make up a plan; or to take any well-known historical military situation, of which full details are available, and to write an appreciation of the situation from the point of view of the respective commanders, and then see whether one comes to the same conclusions as theirs. Without having made this appreciation with the knowledge available at the time, one has no right to criticise the actions of the generals, simply judging from the results. Practice such as this teaches the art of appreciating quicker than most ways, and the last method certainly teaches military history in a way that no other method does. Examples of this last method, which, it is suggested would repay study from all points of view, are the following appreciations made by:—(a) The Chief-of-Staff to Blücher before the battle of Ligny; (b) Lord Roberts on arrival in South Africa; (c) Kuropatkin on the receipt of news of the landing in Korea of the Japanese 12th Division; (d) G.O.C. 2nd Corps before the battle of Le Cateau; (e) General Aylmer or General Lake before Kut; (f) Ludendorff on assuming control of the Eastern front.

There is an interesting series of appreciations written by de Marsin and other French generals to the French Court at the time of the Marlborough wars. There is also a rather remarkable appreciation by General Townsend before Qurna in his book, "My Campaign in Mesopotamia," while it is suggested that General Swinton's classic stories—"The Defence of Duffer's Drift," "The Green Curve," and "The Second Degree,"—make the most excellent light reading on the subject. Finally, there is a very valuable article on "The Framing of Orders in the Field," by Lieutenant-Colonel G. F. R. Henderson, in the R.U.S.I. JOURNAL for July, 1896.

THE FUTURE OF THE ROYAL MARINES

By MAJOR M. EVERETT, D.S.O., R.E., p.s.c.

THE object of the present writer is not to attempt to solve a difficult problem, but to make a few suggestions so as to induce other officers of the Services concerned to think about and discuss the question. He also hopes that, as naval, marine and army officers will probably combine to tell him he is talking nonsense, co-operation between the Services may thereby be advanced in some small measure.

His attention was first drawn to the problem when he found that no two Royal Marine officers gave the same answers to the two simple questions: "To what Service do you belong? What is your Corps for?" Naval officers call them soldiers: army officers say that as the Marines are administered by the Admiralty, they are obviously sailors. Both agree that they do not quite know what the Corps of Royal Marines is for, but that they do know that it is a very fine body of men with a wonderful *esprit de corps*.

It is obvious that a force, of which the functions are not known, is in grave danger of extinction in these days of economy, and it is equally obvious that a great *esprit de corps*, which, like the Oxford lawns, is the result of hundreds of years of watering and rolling, should be retained for the benefit of the Empire.

The writer feels that the question is sufficiently controversial without making any attempt to find any large fields for economy such as might be discovered, were his suggestions adopted, in the disbandment of existing forces. He therefore proposes to discuss the matter on the basis that the Corps of Royal Marines will remain at about the same strength as at present, and that the strength of the army will be unaffected. It should, however, be remembered that in these days of a Committee of Chiefs of Staff, an Imperial Defence College, and so forth, any organization which promotes closer co-operation between the Services is worthy of full consideration even if it entails interference with existing interests.

* THE ORIGINAL FUNCTIONS OF THE ROYAL MARINES.¹

The Marines were first raised in 1664 as "Land Souldgers to be distributed into his M^{at}s Fleets prepared for Sea Service," but even in those early days there appears to have been considerable doubt as to their true functions.

¹ See R.U.S.I. JOURNAL, 1918, p. 555.

They were to be "formed to the exercise of Granadiers": they were also to be "frequently exercised at the Great Guns." It was also suggested that they should serve as "nurseries for the fleet so that the King may draw 150 able seamen yearly out of each Regiment to encrease the stock of that useful people." They were also often employed during the 17th and 18th centuries to "commence the fitting and rigging of ships brought forward for service."

While, however, the Marines were bombers, gunners, naval recruit depots and dockyard mateys in turn, yet it is clear that two functions were invariably considered the most important, namely the protection of the naval officers of a ship against possible mutiny on the part of the seamen, and the attack of enemy ships by small arm fire from the tops as well as by boarding attack with pikes.

THE PRESENT FUNCTIONS OF THE ROYAL MARINES.

According to "Instructions R.M. 1922," the Corps is "a military body specially organized and trained for service in the fleet as well as on shore. It forms part of the Regular Forces of the Crown, with the sanction of Parliament, renewed annually in the Army Act." To this is added in "General Standing Orders R.M. 1922" the statement that "it is raised and supported by naval funds, and constitutes an important part of the naval forces of the country." The same publication also lays down that "the general training of the Corps is that of infantry . . . together with training in Naval Gunnery. A percentage is also trained in Land Artillery, Machine Gun, Army Signalling, etc., as required from time to time."

From the above, while it is clear that the old tradition of being all things to all men is not quite dead, and that the level of training aimed at is a very high one, including as it does both naval and military work, yet the question "To what Service do the Marines belong?" is still in doubt. The Adjutant-General R.M. states that the Corps forms an important part of the naval forces, and yet it only exists by virtue of the Army Act.

The fact that the status of the Corps is somewhat nebulous is, possibly, the chief reason why its functions are also somewhat nebulous. The Admiralty look upon the Marines as soldiers, and the War Office look on them as sailors, with the result that neither have really considered their employment.

In actual fact, the functions of the Corps at the present time may be summarized as follows:—

- (a) To fight some of the guns of the fleet.
- (b) To provide guards and officers' attendants in the larger ships of the fleet.

- (c) To provide small landing parties to subdue small local disturbances in peace time.
- (d) To effect the capture of small advanced bases for the navy in war.

It is to be noted that Marines are no longer required for their original duties: the whole standard of the seaman of to-day is such that naval officers do not require a safeguard against attack, and hostile ships in action no longer come within boarding or even rifle range.

Of the above four modern functions, it is quite obvious that the personnel of the Royal Navy are quite capable of relieving the Marines of the first two. It is true that an element of competition of considerable value would be lost, but on the other hand the increased homogeneity of the personnel on board would certainly facilitate training and administration. In this connection it is worth noting that there are no Marines in the Royal Australian Navy. Should, however, these functions be entirely taken over by the sailors it would be impossible to have Marines on board ships at all, owing to the lack of accommodation; every man in one of H.M. Ships must justify his presence on board by helping to fight her.

As regards the third and fourth of the above functions, it is considered that, while the landing of small bodies of Marines is sometimes extremely useful in peace time to assist the Royal Navy in its task of policing the world, yet in war the opportunities for such a form of activity occur so rarely that this function should not be allowed to be the decisive factor in deciding on the best organization for the Corps. During the Great War not only were there practically no examples of Marines landing, unsupported by the Army, except during the very early days at the Dardenelles, but there were no possibilities of such action. Moreover, if the alterations suggested in this paper are carried out, the Marines will still be able to fulfil this function just as in the past.

The fourth function is, however, a different matter. Should it be possible for the Corps to carry out this duty efficiently it is obvious that the Navy will be very greatly aided in its prosecution of the war. In the last naval war, the main fleet was confined to the narrow seas: in the next, the main theatre of operations may be out in the great oceans, where the unexpected seizure, defence and provisioning of an advanced island base may not only enable the fleet to operate at far greater distances from its main base, but may furnish an objective which the enemy will feel bound to attack before he can carry out his main plan.

FUNCTIONS AND ORGANIZATION OF THE MARINE CORPS OF THE U.S.A.

Before discussing whether our Corps of Royal Marines is in a position to carry out its function of invasion it will be of interest to examine the duties and organization of the Marine Corps of the U.S.A. In May, 1925, the report was published of the findings of a very influential naval

board in the U.S.A. This board examined, among other subjects, the Marine Corps.

The main function of the Marine Corps is laid down as being "to support the Navy by furnishing detachments to vessels of the fleet in full commission, guards to shore stations, garrisons for outlying positions; and by the maintenance of an Expeditionary Force." While the fact is insisted on that "the primary mission of the Marine Corps requires that its Expeditionary Forces shall act as an integral part of the fleet, and that these conditions can only be met by sea training in the active ships of the fleet of a large part of the personnel of the Marine Corps," yet it is quite clear that this is only looked on as a means to an end, and that the final end of organization and training is "the seizure and defence of advanced bases." This is described as "the primary function of the organized Marine Corps Expeditionary Forces."

This naval advanced base idea has developed because it has been foreseen that temporary bases will be necessary within the theatre of possible naval operations from which the fleet may operate, and where ships, especially smaller craft such as destroyers and submarines, can go for periods of rest.

One of the conclusions reached by the investigating Board is of interest. "That the Marine Corps Expeditionary Forces must be so organized as to permit of rapid expansion in time of war to the strength estimated as essential to meet the requirements of the fleet in war."

No mention is made of combined operations with the Army, the very existence of which seems to have been ignored by the Board.

THE FUNCTION OF INVASION.

It has been seen that the Marine Corps of the U.S.A. is organized for invasion on a small scale as its primary function, and it is thought by many in our Services that this is the primary function of our own Royal Marines. It is, however, clear that our Royal Marines would never be sufficiently numerous, nor sufficiently equipped with the auxiliary arms required, to enable them, alone, to seize an advanced base of any importance, and it is considered that, notwithstanding the proviso quoted above about expanding to the strength considered necessary, the Marine Corps of the U.S.A. would also be unable to undertake anything but quite a minor operation.

Should the seizure of an advanced base for the fleet be decided on, the existence of a highly-trained corps, used to working with the fleet, used to handling small boats, not incapacitated by bad weather at sea, and forming a part of the Service with which it is to fight, namely the Army, would be of inestimable value.

The G.O.C., who, under present conditions, is told that he is to carry out a landing and that he is being given a force of Royal Marines to

form the first flight, would undoubtedly feel very doubtful about entrusting the most important part of the whole operation to troops about whose training he knows nothing and for whose training the War Office has not been responsible. He would also feel very disinclined to leave the command of these first flight troops in the hands of officers who know they are not eligible for the highest commands in the Army, and who, therefore, have not had that great incentive to keep themselves fully efficient in land warfare in its broader aspects.

From the above, it would appear that the two outstanding difficulties at present are that the Royal Marines are not trained by or with the Service with which they are to fight, and that the highest commands in that Service are not open to their officers.

The presence of Marines on board ships is essential, as without it that close liaison and knowledge of sea matters would be lost which are of such great value in war, but it must never be forgotten that their duties on board ship can equally well be done by sailors and that the Service with which the Marines will have to fight is the Army and not the Navy: service on board H.M. Fleet is, in fact, only a means to an end.

SUMMARY OF CORRECT FUNCTIONS OF THE ROYAL MARINES.

From the above investigation it appears that the primary function of the Corps of Royal Marines is to act as soldiers who are specialists in combined operations more particularly in gaining the first foothold on shore in an opposed landing. Whether this operation be for the purpose of seizing an advanced base for the Fleet or of initiating any other invasion or raid is immaterial. As the opportunities of doing this without army backing are unlikely to occur, they must be trained, as regards the actual fighting, by the Service under whose ægis they will fight.

To enable them to be specialists in this type of warfare, they must spend a considerable part of their service afloat, where they should learn not to be seasick, to handle small boats and other landing craft, and to embark and disembark quickly and silently, and where their officers should become the acknowledged experts in supporting troops ashore by naval gunfire. Afloat, they will also gain that knowledge of naval organization, of naval traditions, and of naval personnel which will enable them to work with the Navy closely and without friction in war.

ALTERATIONS NECESSARY IN THEIR ORGANIZATION.

The War Office must take over the Marines as a definite part of the Army.

The Corps of Royal Marines would then, like any other technical corps, carry out the training laid down for it by the War Office, and would be subject to inspection by the local General: discipline, as at present, would be under the Army Act. There appears to be no necessity to alter terms of service, pay, pension, or anything else, nor does it appear

necessary either to make any alterations in the life of the Marine afloat. Just as at present, he will fight part of the armament of the ships, provide guards and so forth, and he will remain under the Naval Discipline Act while on board any of H.M. ships. The only difference will be that he will be actually a part of the Army, but it does not seem that this difference will be of more than academic, and possibly sentimental, interest either to the personnel of the Royal Navy or to the officers and men of the Royal Marines in the ships.

At present, out of a total strength of about 10,500, there are some 3,100 to 3,400 Marines afloat, of whom about 1,300 are with the Atlantic Fleet, and an equal number with the Mediterranean Fleet. No attempt is made in this paper to consider the best form of organization, beyond suggesting that possibly battalions of six to seven companies, of which two or three will always be afloat, leaving a normal battalion organization ashore, would prove most suitable. Such battalions would naturally be stationed at or near large naval ports, and it should not be necessary to make any great alterations in the accommodation already available.

It will, of course, be essential for the War Office to undertake to keep available for service afloat a definite number of officers and men.

ADVANTAGES OF THE SUGGESTED REORGANIZATION.

- (1) The Royal Marines would be trained by the Service with which they will have to fight.
- (2) Their training to act as formed battalions would be made much easier.
- (3) The seizure of advanced bases for the Fleet would therefore be greatly facilitated.
- (4) The Army would take a greater interest in the Corps : there appears to be no reason why the Navy should take less than at present.
- (5) Royal Marine officers would become eligible for the highest commands in the Army as are officers of other technical Corps. The result would be a great increase in the interest taken by Royal Marine officers in land warfare, the type of warfare for which their Corps primarily exists.
- (6) Marines would still be available to carry out all their present functions on board H.M. ships, and to land when necessary in peace time for the preservation of law and order.

Note.—Correspondence is invited on this subject.—ED.

FRENCH STRATEGY AND TACTICS IN SYRIA

(Through the courtesy of the French Military Attaché in London, the following article has been specially written for the R.U.S.I.

JOURNAL by an officer of the French General Staff).

FROM the time the French relieved the British in Syria and Cilicia, in 1919, down to the present day, they have been engaged, practically without interruption, in operations against different sections of the various inhabitants (Turks, Arabs, Alaouites, Druses, etc.) in all parts of Syria. It is, in consequence, not without interest to review the type of strategy and tactics that have been employed by the French Command during those strenuous years and the lessons that have been deduced therefrom. But a few words about Syria itself should precede any such remarks.

Syria is above all a geographical and an ethnographical chaos, the second being the consequence of the first.¹ It is composed of a succession of separate sections entirely different from one another, inhabited by different races, possessing no roads worthy of that name, and very few resources. It is, moreover, difficult to reach and to traverse. The few existing railways have a very limited capacity.

Variations of temperature are very accentuated. In winter, snow, rain and wind prevail. In summer, a tropical heat is occasionally interrupted by torrential downpours. Siroco² is, however, rarer than in North Africa. The summer nights are generally very cool and would be restful but for the presence of an extraordinary quantity of insects.

A good feature of the country is that water, although by no means abundant, is not so rare as in Algeria, except in the desert region on both sides of the Euphrates. Nearly everywhere there is to be found a certain, if not large, quantity of cattle, poultry and fruit, but wheat, barley, oats and "têben"³ exist only in small quantities, and this makes the feeding of horses and mules a serious problem for military columns.

No billeting is possible. Bivouac in all seasons is alone possible.

Let us now turn to strategy and tactics.

¹ One finds in Syria twenty-six different religions.

² Burning south wind.

³ Kind of straw.

Strategy.—In Syria, strategy has assumed an unusual aspect. In previous colonial campaigns undertaken by French troops (Indo-China, Sudan, Madagascar, Morocco, etc.), the commander-in-chief had been given a free hand. He was therefore able to follow a general military plan established by himself, in which politics ranked only as the auxiliary of strategy. He generally started by establishing a strong base, on the coast or inland, wherefrom he pushed forward towards a definite objective, which in practice came to mean a frontier, natural or artificial. On attaining that frontier, he organized it defensively in order to hold it easily with a minimum of forces and behind this organized frontier, the country was next developed according to certain definite plans.

In Syria, conditions were entirely different. Strategy has come to be the auxiliary of politics, and, one might say, of diplomacy. This is not a conquest nor even a protectorate. France does not seek in Syria any territorial gain, but only bears in view the establishment of the mandate of which she has accepted the burden. She has to face an ever-changing situation. Political requirements, exigencies and obligations constantly and endlessly modify the decisions of the military command, and the strength of the forces of occupation. A general and durable plan is impossible to establish, and, in its place, we find an uninterrupted succession of overlapping problems, several of which have to be dealt with at the same time.

The following summary will give some approximate idea of those strategic problems :

- (i) In the first instance a small French detachment called " Syria-Palestine Detachment," forming a part of the British forces under Field-Marshal Allenby, could only play a secondary part in the operations owing to its numerical weakness and its subordinate position.
- (ii) In 1919, there took place a relief of the British by the French troops, not on the scale of man for man but of post for post, with numerically inferior forces, and this was followed by a so-called peaceful occupation of the country. And here began a paradoxical situation. While the first task of the French consisted in sending detachments to the outer circle of occupation, at Urfa, Marache, Bozanti, etc., that is to say, very far from the coast, certain important regions such as Aleppo, Damascus and the D.H.P.¹ railway between the outer circle and the coast, remained in hostile hands. Political considerations required the immediate sending of troops to certain centres at long distances from the sea, even beyond the natural frontiers of Syria or Cilicia, whilst hostile elements which could not be dealt with, owing to

¹ Damascus—Homs—Prolongation.

lack of troops, occupied important, not to say vital, regions between those centres and the coast. The inevitable result of such a situation was that, when the centres on the outer circle of the occupation were seriously attacked, they fell for the simple reason that supplies could not reach them.

(iii) From the end of 1919 onward, Cilicia was invaded by the Turks. The solution then contemplated—and carried out by the French—was to protect the rich plain between the Taurus mountains and the coast by organizing a continuous front, strongly occupied, facing the mountains, then behind that front to sweep the country with parallel columns from north to south and east to west. This method proved very costly in men and material, as the British themselves had experienced in the second part of the South African War.

(iv) After having pacified and organized Cilicia, the French had to direct their main effort towards Aintab, which was more or less blockaded by the Turks, and was finally occupied after a long, difficult and costly struggle.

(v) Next came the operations directed against the Emir Feysal, this step being rendered necessary by his hostile attitude towards the French; that necessitated sending forces against Damascus and Aleppo. The operations were relatively easy and of short duration although their political and military results, i.e., fall of Feysal and occupation of Damascus, were of capital importance.

(vi) All the above events and consequent obligations had led the French to leave aside entirely certain mountainous Syrian regions of the interior inhabited or occupied by hostile elements, such as regions of the Alaouites, Djebel Zahwiye, Kosseir, Kefert-Harim, Kurd Dagh, Djebel Druse, etc. This was due to the fact that the French, as said above, had first to occupy the outer circle and to neglect certain regions inside that circle. From 1921 up to the present day there has, accordingly, taken place a succession of campaigns in the interior of Syria which are not yet terminated.

Those campaigns have been and are still being carried out by mobile columns: here we find that different systems have been adopted.

One system is called "*system of converging columns*." The name speaks for itself. These converging columns are set the task of capturing geographical objectives and of clearing the country, but, except in the case of their effecting a complete surprise, they generally fail in totally surrounding, capturing and destroying the enemy.

Another system is called "*system of parallel columns*." These parallel columns sweep the country and, to use a domestic simile, merely

displace the dust. They generally obtain only temporary results that are out of proportion with the casualties and losses entailed. The work has to be done over and over again.

A third system is called "*system of occupation of successive zones of the country*," or, as Marshal Galliéni and Lyautey, who are the fathers of that system, used to call it "*system of pouring oil*." It is a combination of parallel columns sweeping a definite zone of the country and pushing the rebel bands towards another column, either stationary or mobile. If stationary, this column occupies certain points such as bridges and fords on a river, passes in a range of mountains, etc., which the enemy is compelled to use. If mobile, the column is rapidly pushed across the probable lines of retreat of the enemy and then marches towards the parallel columns to encircle the rebels. Both methods, before the parallel columns can be launched, necessitate a preliminary blockade of the zone of the country which it has been decided to occupy.

Once the region under review has been conquered, the occupation is consolidated and rendered permanent by erecting a certain number of posts (not too many, not too few) on the most important points and establishing adequate communications.

Such is the "*system of conquest by successive zones*," which can be summed up by the three words: columns, posts, roads. In the eyes of the natives the columns mean France that is passing showing her power; the posts and roads, France that is staying showing her determination to carry out the mandate entrusted to her. When the Alaouites saw the French troops building in their country roads capable of supporting heavy vehicles, they exclaimed: "Now that you can take your guns everywhere, you are the masters of our country!"

To the military action, as explained above, must, of course, be added political action which develops in parallel to the active operations (creation of schools, establishment of markets, medical assistance, etc.), but this lies outside our subject. All that can be said is that the Syrian, like every other oriental race, generally speaking, respects power only when he sees it always vigilant, strong, one could say, even implacable. He despises a master when he ceases to fear him, and the Arab saying can be applied to him: "Kiss the hand of the one you cannot stab."

General Tactics.—Occupation means conquest and conquest means offensive action. Now military action can be delayed; it cannot be altogether avoided—sooner or later recourse must be made to it.

The beginning of the French occupation in Syria was characterised by a strategic rather than tactical defensive. But, from 1920 onwards, tactics become more and more offensive for moral as well as military reasons.

In Syria it was soon found that the enemy possessed all the qualities that are usually associated with the bold and active irregular warrior,

namely, the accuracy of his shooting, mobility, knowledge of the country and constant attack of the invader's communications.

Warfare in Syria is based essentially on movement and not on fire action. This may seem contrary to the ideas accepted in France, during and after the Great War, and to the general evolution of tactics. It does not mean, however, that fire is negligible in Syria. Its effects are just as terrible there as anywhere else, but, in Syria, it is possible to neutralise those effects by using mobility to the fullest extent. In other words, movement comes before fire. In Europe, in a field operation, the plan of fire comes first and influences the whole manœuvre. In Syria, fire does not come first and its main utility is to render manœuvre possible.

What is the nature of this manœuvre in Syria? It has to be rapid, of wide compass, and develops across high ground.

How is fire to be used in this manœuvre?

- (a) Fire is opened as soon as possible, in order to acquire superiority;
- (b) Protective and massed action is employed by guns and especially machine guns;
- (c) Flanking fire with machine guns and, if possible, with artillery is essential.

As long as these rules regarding manœuvre and fire are neglected, the enemy losses will be small, the results obtained slow, and incomplete when not negative. When, on the contrary, they have been observed, the enemy casualties will be heavy and the tactical results decisive. The method can be summed up thus: "continuous attack under protection of continuous fire."

Organization of the Columns.—When the strength of a column is too small, that column cannot undertake any manœuvre and its capabilities are reduced to frontal attacks. When, on the contrary, it is too strong, the column cannot be supplied easily and must consequently carry a huge convoy which renders its movements very difficult. A large column requires a large convoy for its material existence; a large convoy requires a large column for its security. Here, as in all manifestations of life, the Latin saying "*In medio stat virtus*" holds good; the truth lies between the two extremes.

For the organization of the column we have also to distinguish between operations in a flat country and operations in mountains.

In a flat, or relatively flat, country a mobile column is generally composed of:—

- 4 Infantry battalions.
- 3 Cavalry squadrons.
- 2 Batteries (1 field, 1 pack).

Half Engineer company.

A certain number of armoured cars and tanks.

1 Ambulance.

1 Convoy (wagons and camels).

No aviation formation is mentioned because, although aviation sections or squadrons always co-operate with the column, they do not form part of the column itself, but fly from their aerodrome situated on the coast or at a suitable place on the lines of communications to the scene of operations. The machines return to their aerodrome when their day's work is finished.

The general formation adopted by a mobile column is the formation called "pig's head formation" or "cross formation," "square formation" being entirely prohibited.

The inside disposition is generally the following :—

- | | |
|---|--|
| (a) Advanced Guard | 1 Cavalry troop.
Half Engineer company
2 Infantry companies.
1 Machine gun company.
1 Pack artillery section. |
| (b) Flank Guards, each | 1 Cavalry troop.
2 Infantry companies.
1 Machine gun platoon. |
| (c) Main Body | Headquarters.
1 Cavalry troop.
2 Infantry companies.
1 Machine gun platoon.
2 Batteries (less 2 sections).
Ambulance. |
| (d) Convoy (divided in Sections, each section commanded by an Officer). | With an escort of—
1 Cavalry troop.
1 Infantry company.
1 Machine gun platoon. |
| (e) Rear Guard | Same as flank guard. |
| (f) Mobile Detachment (or detachment of manoeuvre). | 6 Cavalry troops (1½ squadrons).
1 Infantry company.
1 Machine gun platoon
1 Section pack artillery. |

This mobile detachment is intended to be as light as possible as regards equipment and baggage, and is commanded by a specially selected officer. Its name speaks for itself and clearly indicates its role.

In mountainous country, a mobile column is composed as follows :—

- 3 Infantry battalions.
- 1 Cavalry squadron.

- I or 2 Pack batteries.
- I Engineer section.
- I Ambulance.
- I Convoy (mules, or exceptionally, camels).

Same observation as regards aviation as for a column operating in flat country.

In such regions, the only possible formation is the Indian file. Security of the column is here based on different principles. In mountainous regions, security is based, not on distance as in a flat country, but on the timely occupation of high ground.

To achieve security, high ground must be occupied in front, on the flanks and in the rear of the columns. From that condition are derived the special methods of marching. The column imitates the movements of a snake or, following the French current expression, of a concertina, constantly modifying its length and width according to the ground in order to fulfil the conditions explained above. The general principles applied can be formulated thus: to hold the high ground and, if possible, to advance over high ground. Whenever it is possible, the whole of the column marches along the crest of the hills or across the plateaux, the organs of security then marching on the slopes on each side, within a short distance of the main body and convoy. When it is not possible to use the high ground for the main body, the march of the column is protected by flank guards posted on commanding and defensively organized positions on each side of the column. When an engagement with the enemy takes place, those fixed and defensive flank guards assume a more mobile and offensive role.

The general distribution of the different arms inside the columns follows logically from the conditions which have to be met:—

- (i) One battalion covers the front and the flanks (advanced guard and flank guards) and engages the enemy;
- (ii) One battalion (with column headquarters, artillery and close support mortars) constitutes the element of manoeuvre (that manoeuvre generally consists in an outflanking movement);
- (iii) One battalion protects the convoy and covers the rear of the column.

The different contingents are used according to their particular aptitudes and their fighting value. The Algerian and Moroccan sharpshooters, for instance, form an advanced guard and flank guards on account of their extreme mobility, their marching qualities, their endurance and their offensive spirit. The Senegalese and Indo-Chinese troops supply the immediate protection of the convoy and the rear guard on account of their steadiness when on the defensive. The

Europeans (French and Foreign Legion) constitute the element of manœuvre on which rests the final decision of the battle.

In Syria, the well-known military formula "Victory lies in the legs of the infantry," is perhaps truer than anywhere else owing to the remarkable mobility of the enemy and, as regards organization of marches, the main problem is consequently the lightening of the burden of the infantry soldier.¹ One cannot say that it has yet been satisfactorily solved. Motorization may perhaps bring the longed for solution.

The normal way of camping is bivouacing. As a rule, a bivouac is established near or round water (well, spring, stream, etc.). In flat country, it can be formed in a regular way, generally a square. In a mountainous region, this is seldom possible as the ground and the altitude will influence the ruling dispositions; here, too, the column commander establishes his bivouac, following the same principles as above with the difference that he cannot always establish it on high or dominating ground. In that case, the battalion on each face of the bivouac will post companies or platoons on the hills surrounding the bivouac and commanding the water. These companies and platoons entrench themselves on those hills (constructing trenches and barbed wire entanglements), so as to obtain cross fire. In addition, on certain especially important dominating points, one or two pack guns may be established.

Another important consideration in the organization of mobile columns concerns communications between the columns and the base, between neighbouring columns and inside the column itself. The difficulties are considerable owing to the distances, to the ground—very often hardly known and presenting important material obstacles—to the hostility of the population and to the unceasing movements of the columns themselves. It has been found that means of communications which in Europe are considered as obsolete could still render very good services and have been employed concurrently with the most recent inventions. One, therefore, finds in Syria a combination of old and modern signalling equipment. Among the old and still frequently used runners and despatch-riders (on horseback), visual signalling (very commonly and constantly used), and pigeons (uncertain owing to the presence of numerous birds of prey).² Among the more recent means of communications are telephony (very difficult to establish and to keep going, ground telephony (nearly impracticable), wireless (which renders immense services) and aviation.

¹ British Officers on the North-West Frontier of India have long been familiar with similar problems.—Ed.

² These birds were employed by the British in the Sinai desert and elsewhere, when birds of totally white plumage were found to stand the best chance of escaping their enemies.—Ed.

On the whole, the liaison—both between the different columns and within the columns—were carried out by means of visual signalling and runners. The liaison between the columns and the base or bases through wireless, aviation and, eventually, pigeons.

Tactical Considerations particular to each Arm.—As already shown, the essential features of field operations in Syria are: primary importance of mobility and manoeuvre, preponderating influence of outflanking movement and rapidity in obtaining decisive results which cannot be very often exploited owing to the heavy handicap of defending the convoy.

On the other hand, it is difficult, not to say impossible, to modify the particular missions of the different elements of the column, once the latter is seriously engaged in a certain direction, either on the march or in battle. Hence the imperious necessity of specialising each fraction in its probable future role. Every man must know his role beforehand.

From the above general considerations follow logically the tactics to be adopted by each arm in the operations. We shall now examine the different arms successively.

Infantry.—It must be recalled that by the term "infantry" the French imply not only the rifleman, but also the machine gun and the infantry gun (37 mm. gun and Stokes).

The security of the march of the column, and subsequently of the attack, is ensured by the presence of strong and powerful fire elements with the advanced guard (machine guns and, eventually, pack guns). The machine gun company attached to the advanced guard progresses by echelon of half companies. One half company move forward as the first infantry element, whilst the other half company is established on high ground and protects by continuous fire the advance of both infantry and other machine guns. It fires, either above them or from some flank position. When the advanced half machine gun company has in its turn found a suitable position, it establishes itself on it and opens fire whilst the rear half machine gun company closes up as rapidly as possible.

Before the column commits itself into a pass, part of the machine guns are posted on points wherefrom they can fire immediately on any obstacle revealing itself in the interior of the pass.

Before the column enters a wood or a region of dense scrub, the machine guns sweep the wood or scrub with echeloned volleys. If the enemy occupies those woods or scrubs, he answers the fire and reveals himself. If he does not answer, one can generally infer that there is no enemy or that he has gone away.

A good and adequate use of the machine guns advantageously replaces the riflemen, whose musketry training, especially with a short

term service, is far from being entirely satisfactory. The method employed consists in combining the fire power of the machine gun with the *élan* of the riflemen, especially when the latter are North Africans. That *élan* leads the riflemen under the protection of an adequate machine gun, and eventually gun fire, to hand to hand fighting. But in that case, attack with fixed bayonets is launched only at a very short distance from the enemy. Otherwise, it invariably fails. One can unhesitatingly say that in Syria, infantry remains the unquestioned queen of battles.

The 37 mm. gun has proved an excellent infantry gun for Syria. It can be carried easily everywhere through difficult ground. Its fire is rapidly opened and is very accurate. It is a battalion, not a column, weapon.

The Stokes mortar meets the requirement of a light and sufficiently powerful gun possessing a curved trajectory. Its projectile produces sometimes moral and material results superior to the 75's. It is a column, not a battalion, weapon.

The lessons drawn from Syrian warfare have led to the conclusion that the infantry battalion ought to have the following organization:—

- (i) 1 Headquarters Company 1 Platoon (signals).
1 Platoon (mounted infantry).
1 Platoon (pioneers).
1 Platoon (3 Stokes).
- (ii) 1 Machine gun company (12 machine guns, 1 37 mm. gun).
- (iii) 4 Infantry companies.

The machine gun company, instead of having 16 machine guns, which makes it too heavy to handle, should be organized into:—

- 4 Platoons of 3 machine guns each.
- 1 37 mm. gun.

The infantry company in Syria has just been re-organized (1926), and is now composed of:—

- 1 Headquarters platoon.
- 1 Machine gun section (2 guns).
- 3 Platoons, with each (2 sections of riflemen and 1 section of light machine guns, 2 guns).

It has been found that the pattern of rifle (as used in the Great War) could be advantageously replaced by another French rifle called "Indo-Chinese rifle, 1903 pattern," which is a remarkable weapon possessing the precision of a range rifle and the strength of a sporting rifle. It is 1.126 mm. long and weighs 3.6 kg. (the barrel is 0.6334 m. long). The rifle used in France was found too heavy and not strong enough for Syrian operations.

The new light machine gun, 1924 pattern, which has just been issued to the troops in Syria, is excellent but unfortunately its calibre is

not the same as the rifle's (7.5 mm. instead of 8 mm.). On the other hand its extraordinary rapidity of fire makes its supply in ammunition a very difficult problem. A great many soldiers in Syria think very highly of the Madsen light machine gun, which had been used to a very large extent before the appearance of the 1924 French light machine gun, and found excellent. The Hotchkiss machine gun has given entire satisfaction. Its only drawback for Syria is that its tripod is too heavy and difficult for man handling.

The 37 mm. gun is, as already stated, an excellent infantry weapon. It could, however, be improved by replacing the black powder of the charge by smokeless powder and its projectile, which also contains black powder, by a H.E. shell.

Artillery.—Artillery has, in Syria, a relatively secondary role, owing to the difficulties of movement, of supplies, of observation, and also on account of the small number of batteries available. It has, nevertheless, rendered great and valuable services.

The 155 mm. heavy gun has rarely been employed, but when it has been in action, its moral and material effects have been remarkable.

The 75 mm. field gun has shown itself, as usual, a very efficient weapon, but capable of use only in flat or relatively flat regions.

The 65 mm. pack gun can go everywhere. It constitutes a very accurate and very mobile weapon, but it takes a rather long time to open fire and its H.E. shell has only poor destructive effects. A larger calibre would be preferable.

Artillery in Syria has never been used *en masse*. It has always been engaged by sections. The consequence is that barrage as practised in the Great War is unknown and forms no fire accompaniment of the attack, in the western sense of the word. Artillery makes itself felt in Syria by :—

- (i) Opening fire before the enemy ;
- (ii) Covering the attack by fire directed not on the immediate objective but on the following one ;
- (iii) Pursuing the enemy by its fire.

In the Great War, except perhaps towards the close, artillery was always used *en masse*, and machine guns by sections. In Syria, it is the reverse ; machine guns are used *en masse*, and artillery by sections.

It is generally thought by those possessing a long experience of Syrian warfare, that the pack batteries ought to include, besides their four pack guns, two pack howitzers.¹ The actual 65 mm. gun has a flat trajectory and a short range, and its calibre is too small. It would be

¹ On the North-Western frontier of India our 10-pr. gun and 3.7 howitzer were combined into mixed batteries as far back as 1919.—Ed.

of great advantage if the field and pack guns had the same calibre, i.e., 75 mm., with a range of at least 7 km. and if the projectiles included shrapnels, H.E., and incendiary shells, and also what the French call *obus allongé* (elongated shell) with a large quantity of explosive for important destructions.

The pack howitzers to be added to the present pack batteries should be of as large a calibre as the pack system allows, and not less, in any case, than 90 or 95 mm.

Cavalry.—In mobile warfare, the role of cavalry assumes great importance. In Syria it has always been found that cavalry units were always too few, even in mountainous regions. Cavalry is used for long distance reconnoitring, long distance security, protection of threatened flanks, mobile reserve of fire and liaison. In flat regions, cavalry acts dismounted (fire) and mounted (charge). In relatively mountainous parts of Syria, it is generally employed to cut off the enemy's line of retreat. The Syrian and Arab horses are very light, very agile and pass everywhere. In the mountains, cavalry forms a mobile reserve of fire to reinforce the attacking infantry or the rear guard when necessary. It is also used to carry out liaison work along the lines of communications.

Tanks.—The utilization of tanks in Syria has not been very frequent, owing to difficulties of ground (huge boulders on the plateaux and deep ravines with very steep slopes), to the lack of topographical knowledge of certain regions and to the absence, in certain cases, of sufficient maps. They have none the less, played a decisive role in a few engagements and in street fighting, but they have failed against strong stone barricades and against strongly built and defensively organized houses.

Towards the end of the Great War, the tank was considered by many as a universal and irresistible weapon. Syrian warfare has modified to a certain extent that too general and too absolute opinion.

Armoured Cars.—In spite of the great difficulties encountered as soon as the armoured cars had to leave the roads, they have played a part which has not been without importance.

Armoured Trains.—An armoured train in Syria includes generally a 65 mm. protected gun, a few machine guns and an infantry platoon. It is used as a mobile reserve of fire and to cover repairs of the railway track. Armoured trains have rendered very valuable services.

Aviation.—The aeroplanes in Syria were employed for :—strategic and tactical reconnaissance ; bombardment ; photography ; postal service and liaison ; transportation of wounded.

Their work was difficult owing to the extreme scarcity of good landing grounds. Even when found, it was generally covered with huge boulders practically impossible to remove.

Conclusion.—The victories of the Great War had led to the belief that the methods which had proved good enough in that vast struggle would henceforward be of constant and universal use. Since they had proved adequate to defeat the armies of Central Europe, there was a tendency in France to believe that they would easily overwhelm semi-regular native troops. But truth in the West is sometimes error in the East. In native countries, movement keeps first place and to obtain decisive results from movement, the material used, human and otherwise, must be extremely mobile, therefore light. The principles of war never change, whatever may be the time and place, but their application is infinitely varied and must be constantly revised in the light of local conditions. The campaigns in Syria have once more confirmed that truth.¹

¹ These conclusions are entirely in accordance with the experience of the third Afghan War and the Waziristan Operations of 1919-1923.—Ed.

ADMINISTRATIVE LESSONS OF THE GREAT WAR

By MAJOR (TEMP. LIEUT.-COLONEL) W. G. LINDSELL, D.S.O., O.B.E.,
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ONE of the outstanding lessons of the Great War is the importance assumed by all questions of administration. Individuals can fight, but fleets and armies cannot do so, without the organization which maintains the supply of their fighting necessities. It has also been made abundantly clear that modern war depends upon so many complications that the administrative problems involved must be studied in peace for, when war comes, it is too late to set on foot the organization of the necessary administrative machinery.

The growth of the mechanical devices of war and the higher standard of equipment of modern fleets and armies have made this problem of maintenance many times more complicated than it was in any previous era in history. In a Boer War, in a war on the North West Frontier of India, in an East African campaign against von Lettow, hostilities may be dragged out for long periods, as the enemy has little or no essential line of communication, no vital source of supply, which can be interrupted; but in a modern European War the rear organization of a nation in arms is so elaborate and so indispensable that a successful blow at an enemy's maintenance system will yield far quicker and more decisive results than anything known in previous wars. Men and horses can fight for a short time without food or on restricted rations, but the internal combustion engine will not run a yard without fuel.

What brought the German advance in 1914 to a standstill? Maintenance failure—failure to maintain the supply of men, horses and munitions, which were available in Germany but could not be delivered; so the German army outran its maintenance possibilities.

What prevented the relief of Kut? Was it not the impossibility at that time of maintaining a sufficiently strong relieving force at the end of an undeveloped line of communication.

The Russian second army in 1914 was beaten before it ever reached Tannenberg because it was starved.

What caused the eventual crash of the German nation in arms? Was it the victories of Foch, or the blockade established by the British navy?

After the Armistice, why did not a victorious allied army advance in its full strength to and across the Rhine to dictate terms of peace in Berlin, as the Prussians did in Paris in 1871? Because such an army could not have been maintained during its advance. It was with the utmost difficulty that the force that did go forward was fed until the railway system could be reconstructed behind it.

It is in a consideration of these broad administrative facts that the big lessons of the war are to be found. The problems concern not only the fighting man but the statesman and the government, including the governments of the Dominions. The nation requires its fighting forces, with their supply, transport, medical and repair organizations, but behind all this naval and military paraphernalia it requires the entire resources of the Empire and it requires that these shall be organized to meet the needs of the Empire in arms. There is no hard and fast line between the fighting man's task and the statesman's, nor are the problems confined to administrative branches alone: the big questions of maintenance and movement are intimately bound up in every problem of war whatever its nature. Strategy and tactics are now tied hand and foot by administration. The big problems of maintenance must be solved before a war can be brought to a successful conclusion. The side that fails to solve them will be defeated.

Mainly for reasons of finance we do not maintain in peace those administrative units which play so important a part in the maintenance of our fighting formations in war. There is in consequence some danger that their organization, and system of employment, may not receive sufficient study in our peace time training.

The smooth working of these essential services for the maintenance and movement of the fighting formations is of the utmost importance. It is all the more necessary therefore for the principles governing their organization and employment to be studied and thoroughly understood by all officers.

It is certainly true that in the later stages of the Great War the British army was better equipped and supplied than the army of any other belligerent nation, not only as regards its fighting necessities, but also with those items required for the maintenance of a high standard of health and general well-being among the troops. This cannot of course be said of all stages of the war, nor equally of all theatres of operations, and this state of affairs was not reached in a day, it was the result of very considerable re-organization and expansion of all the services concerned; in fact several entirely new services were brought into existence.

We started the Great War with a small expeditionary force of some 120,000 men and 40,000 animals; we ended with a strength, including labour and auxiliary services, of approximately 3,000,000 men and 500,000 animals. In the next great war a similar expansion will be necessary only with this difference, that the development of new methods of warfare and

the advance in the mechanicalization of all arms will call for fresh modifications in our system of administration and for expansion on lines hitherto untried in war.

Although next time there will be many differences in detail in the problems presented for solution, the general nature of the task will be similar to that with which we were faced between 1914 and 1918. It cannot therefore fail to be of value to study how the expansion of our administrative services took place and to consider what the chief difficulties were and how they were overcome.

The static nature of the operations of the first two years of the war in France caused no undue strain on our administrative services, but with the Somme offensive of 1916 difficulties began to arise. The cumulative effects of the heavy demands made upon the transportation services in rear of the fighting troops were now beginning to tell. The railways required extensive repairs and replacements, for which both men and material were lacking; there was a serious shortage of rolling stock; congestion and delays were occurring in the various docks and base ports serving the armies; the increasing demands made by the armies in the field were throwing a strain upon the lines of communication which they had not been organized to stand. It was now becoming clear that the technical efficiency of each link in a transportation system, which served lines of communication maintaining a navy, army or an air force, had assumed an importance far greater than had hitherto been contemplated.

The lesson was being learnt that the problem of the maintenance of great fighting forces was primarily one of movement. Movement must be viewed as a single continuous process from its commencement, say in England, to the delivery of the goods to the soldier in the front line, and including also the return of the means of conveyance—ship, railway wagon, lorry or limber—to its starting point ready for a fresh load. The realization of this primary essential fact for efficiency in any system of transportation brought about the appointment, in November, 1916, of a Director-General of Transportation, whose function it was to control transportation from the ports of landing to the troops, to provide rolling stock and material of all kinds, and to be responsible for railway and road construction.

Concurrently with this realization of the necessity for centralized control of all methods of transportation, there arose also the necessity for administrative control by G.H.Q. of the central reserves of all maintenance requirements of the army, whether food supplies, ammunition, or stores, the organization of which had formerly been the responsibility of the Inspector-General of Communications.

Thus we find one branch of this officer's duties passing to the Quartermaster-General at G.H.Q., while his responsibilities in connection with railways and inland water transport had been taken over by the Director-General of Transportation. The appointment of Inspector-General of

Communications was therefore abolished, the remaining duties formerly carried out by this officer being given to a newly appointed officer called the G.O.C. Line of Communication.

These two changes were very important steps in the organization of our system of maintenance of the armies in the field.

It is necessary at this stage to bear in mind that the functions of the Directorate of Transport, that is horse and mechanical transport, did not form a branch of the responsibilities of the Directorate General of Transportation. This latter officer dealt with docks, inland water transport, railways, light railways and roads. It is in connection with the developments in the use of mechanical transport that the next big administrative lessons were learned.

The re-organization of our transportation services under the newly-appointed Director-General was most successful. Railways were got into proper working order, congestion was relieved and there was a general speeding up of deliveries as the various links in the transportation system were more thoroughly organized and their functions properly co-ordinated as integral parts of the whole movement machine. The requirements of normal trench warfare were adequately met, but further developments of modern war were soon to bring about a very radical change in our road transport organization. The Passchendael fighting of 1917, with its tremendous development of artillery fire directed in large part on our light railway system, made it impossible for these railways to compete with the task of maintaining the supply of the masses of ammunition, engineer stores, and supplies of all kinds, on a scale which the operations demanded. Consequently it was upon the roads and our mechanical transport that the bulk of the maintenance work now fell.

The strain thus imposed on our Mechanical Transport soon showed that our existing policy for M.T. organization, under which vehicles and units were specialized for particular services, was far from the best. Early in 1918 a new policy was adopted under which Mechanical Transport vehicles were organized into companies for use under a central authority, in accordance with the requirements of the situation. Many of our former specialized M.T. units, such as ammunition sub-parks, ceased to exist as such, the "pooling" principle was adopted and a central reserve of mechanical transport companies was formed.

The German offensive of March, 1918, which closely followed our road transport re-organization, showed clearly the advantages inherent in the new system. This offensive was directed against certain vital railway centres behind the allied front, and the over-running of such important lateral railway lines as Amiens—Achiët—Arras and the interruption by shell fire of the line Hazebrouck—St. Pol—Amiens—St. Just interfered very seriously with efficient railway working. Owing to the difficulties of finding return circuits for empty rolling stock, congestion and delays

occurred on the main forward lines, and we were compelled to select railheads far back. At the same time heavy additional demands were made on the railways for stores for the construction of rear lines of defence, for the evacuation of casualties and material of all kinds from areas threatened by the enemy. Demands were also made on the British lines for maintenance of French, American and Portuguese troops and also for feeding civilians. In these circumstances the railways became hopelessly overweighted and congested, so that maintenance of the fighting troops was seriously endangered. The situation was met by the reserve M.T. companies which had been formed on the re-organization.

Not only did the new organization prove its value, but unmistakable proof was also afforded of the necessity for centralized control of all transportation services under the Quartermaster-General.

Enough has been said to show that the lessons to be learnt in the organization and employment of mechanical transport and in the science of transportation generally are among the most important of the whole war. It is the clear duty of all officers to study these lessons, to consider their application to possible future theatres of operations, and to note particularly their bearing on strategy and tactics. All three fighting services are concerned, as each has a part to play in the war time solution of the problems presented, and the army's problem of 1918 may well be the Air Force problem of 1938.

To turn now to other administrative aspects of the war. By the beginning of 1918 there was a world shortage of certain types of war material; the submarine campaign had made serious inroads on the shipping tonnage available for transport; the national resources of the allies both in man-power and material were severely strained. It became essential to institute a policy of the most rigid economy in all administrative services. The task of devising means of economy without endangering the success of operations is by no means easy. The re-organization of our transport services had effected a considerable saving both in men and motor vehicles while similar economies were in process of application to the other services.

The work of many of these administrative services passes largely unnoticed by the bulk of the fighting forces, yet what they do is very closely connected with the individual, and the efficient performance of their duties has very far-reaching effect on the morale, and consequently on the fighting value of the forces as a whole. In this connection the work of the postal service and of the canteen service call for special mention. The importance of regular delivery of letters to the troops cannot be urged too strongly, the feeling of isolation produced—particularly in overseas theatres of war—by non-receipt of letters has a very bad moral effect, while an efficient postal service providing regular communication between the soldier and his friends at home produces a feeling of

confidence which goes far towards success in battle. When communications are long and difficult, postal services are not easy to maintain, but nothing but the most urgent tactical considerations should be allowed to interfere with their regular working. The canteen service in war is called upon to provide rest houses and recreation huts and supplies of every conceivable nature often under the most difficult conditions. During the war a high state of efficiency was reached in this connection, and in France alone the troops purchased 447 million francs worth of canteen stores, a fact which, under active service conditions speaks volumes for the work of this invaluable department.

A brief outline has now been given of some of the main aspects of our administrative services during the Great War. The question now arises as to how the lessons learnt can be applied in preparation for the next war.

A maintenance system such as we now visualize cannot be improvised as a going concern on the outbreak of war. If we leave it till then, we shall find ourselves badly left at the starting gate, even more so in future than we have sometimes been on the outbreak of war in our past history. We must work out our maintenance problem in peace.

In order to write the initial necessary orders to set the administrative machine in working, we should require first of all *intelligence*:—information regarding the resources of our possible enemies and their sources of maintenance and supply; information, too, regarding our own maintenance requirements, resources and sources of supply. Secondly, we would want a plan:—What is our *intention*, what are we going to do in support of our national Empire policy? Then would come the *method* of putting the plan into effect, by which we must organize our resources so as to make them available at the right time and place, so that we can concentrate the maximum force of men and materials at the decisive point.

To consider these three portions of our hypothetical orders in greater detail:—the subject of Economic Intelligence has already been dealt with in the JOURNAL, and need not be further enlarged on at this juncture except to lay stress on the point that it is necessary to examine closely our own deficiencies in raw material of all kinds, available within the Empire, and to make arrangements to supply these deficiencies from safe sources. -We must not start another war, as we did the last, dependent on the enemy for many of our vital necessities. Prior to August, 1914, we got almost our entire supply of optical glass, magnetos, gauges required in gun and shell manufacture, and high speed steel from Germany; we had not the means of manufacturing phosgene, mustard gas or liquid chlorine; and it was not till after the war that we discovered the secret German system of producing synthetic ammonia and nitric acid from atmospheric nitrogen, which commodities are the basis of the manufacture of our high explosives. We must ensure that our war time resources

are adequately protected, and that we know how best to attack those of our possible future enemies. We may rest assured that this question of economic intelligence is now receiving the attention it deserves within the organization of the Committee of Imperial Defence.

As regards the second, or intention, paragraph of the order: we must know the intention of our government: what are we as a nation going to do in certain eventualities? Our intention prior to August, 1914, was to send six divisions to a continental war should occasion arise; what do we mean to do next time? Apart from wars outside Europe in which we may be engaged in furtherance of our world-wide interests, we now have the Locarno pact which gives us definite responsibilities as regards Continental troubles. Based on this pact the part to be played by Great Britain in case of necessity will presumably be determined by our government. The government's policy is the intention paragraph upon which all our plans must be based. It is scarcely conceivable that we shall be engaged in a great European conflict without the active support of the Dominions, though, of course, they have complete freedom of action in this respect. Nevertheless, our administrative plans will naturally include drawing on the material resources of the whole Empire in furtherance of our military policy. The part of the fighting services in the preparation of this intention paragraph will consist in making an appreciation of the situation which will contain the military advice upon which the Cabinet will base their plan.

The method of putting the plan into effect, in so far as peace time preparations are concerned, involves three big problems:—

- (a) Our Military, including Naval and Air Force, Mobilization plans.
- (b) Our National Mobilization plans.
- (c) Our Industrial Mobilization plans.

As regards the first of these, the three fighting services undertake the preparation of their respective plans, which are co-ordinated and tested as is considered necessary by the responsible authorities. In 1914 our plans worked very well; next time there may be the added difficulty presented by the possibility of interference with our mobilization arrangements by the enemy's air forces. This, of course, is a game at which two can play and doubtless we shall take the necessary steps to deal with any possibilities in this direction.

Turning now to National Mobilization, as stated earlier in this article, war is no longer a matter for the fighting services alone; practically every government department is closely affected. The Board of Trade, the Home Office, the Ministry of Labour, etc., all require their mobilization schemes, and next time we may expect to see a Ministry of Munitions, or some similar war time organization, coming into existence on the outbreak of war with as much ease as our new units and divisions will be formed on expansion from our peace time organization.

In 1914 we had practically no scheme for national mobilization on these lines, but the big administrative lesson of the war has been taken to heart by our statesmen, and though our plans may not yet be perfect, we are now certainly in a far better position in this respect than we have ever been in the past.

Industrial Mobilization, presents perhaps the biggest problem of all, but the lessons of the Great War clearly point to the necessity for something of the sort. Attention has already been drawn to the importance of this subject in the JOURNAL of the R.U.S.I., in an article entitled "Industrial Strategy," by Capt. Ross. To make really effective arrangements to this end would probably require legislation which is outside the province of the fighting man, though he can do a great deal to educate his civilian brother in this important question of Empire defence. One does not visualize this country entering on a war of any magnitude without the whole-hearted support of the great mass of the people; but next time we go to war we must not let our national enthusiasm run riot. Our potential officers, our skilled mechanics, our expert chemists, our miners and metal workers, and skilled artisans, must by some means or other have their particular knowledge or mechanical skill directed into the best channel in which to help the nation in arms. Our available man-power and woman-power must be mobilized from the outset.

Next we must mobilize our manufacturing plant and organize its adaptation and expansion to meet war time requirements. Similarly we need to mobilize the Empire sources of supply of raw materials, so as to ensure that all that is needed is directed into the Empire's machine shops for conversion into our essential war equipment. The national scheme for the provision of power, recently outlined by the Prime Minister is a useful step in connection with our industrial mobilization plans.

The problems of industrial mobilization concern rather the civil departments of State than the fighting services, but, in making our military plans for mobilization and the necessary war expansion, we must keep continually in view the big problems of the nation in arms; we must not work in water-tight compartments, but build up our fighting forces with due regard to the requirements of the other departments of State.

To complete the analogy of the war order, of which the first three paragraphs have now been considered, two more headings require to be dealt with, namely, administrative arrangements and inter-communication.

As regards the former, this paragraph would be very detailed and would consider in turn each of the administrative services which are required for the maintenance of our fighting forces. The contents of these instructions will be largely technical and the various requirements are being closely examined at the present time, but much co-ordination still remains to be done. In the technical aspects of peace time preparations the services of course are very severely handicapped by financial stringency.

The increasing unwillingness of the nation as a whole, as its memory of the Great War recedes further into the background, to pay the necessary insurance premium towards minimizing the effects of the next war on posterity, cramps the style of the military technical expert. Research and experiment are, however, being carried on, though we could usefully do much more in this direction were funds available. With the war lesson of military dependence on civil organization staring us in the face we must direct our energies towards stimulating the development of civil firms to produce in peace for commercial use what is readily convertible to our war time needs.

As regards the last paragraph—Inter-communication—on the successful working of our arrangements in this connection everything else depends. The Navy, the Army and the Air Force are all concerned; we must keep open our communications with our sources of supply of raw materials. Oil, minerals, wool, cotton, food supplies, are all vital to the maintenance of our fighting forces and we cannot get them without safe communications. This is so obvious that the subject need not be enlarged on now, except to point out that, in safeguarding our tactical communications with the various portions of our far scattered forces, we must be careful not to neglect our strategical communications which are often purely administrative in their nature; some of our essential war materials are only found in very few places in the world.

One more point—when we take part again in another European war we shall presumably have allies on our side. The value of unity of command was proved in the last war, so was also the principle of unity of control in matters of administration. We never reached a very satisfactory state in this latter connection; though the principle of pooling of allied resources was accepted by all, it tended in practice to sharing the resources of the British Empire without very much in the way of payment. Until, however, some arrangements had been made to this end the competition of allied governments in purchasing in neutral markets resulted in serious waste and soaring prices. We do not yet know who our allies will be in the next war, so we cannot make pooling arrangements in peace. Some arrangements of the kind will, however, need to be set on foot at the very beginning of the next war in the interest of economy and efficiency.

A few of the chief administrative lessons of the Great War have now been considered, there are of course many more. Some of these lessons are for the statesman rather than for the fighting services, but it is the business of the fighting man to advise the statesman, to educate the people and to keep fresh their memories of the war, for if provision is not made in peace we shall be the first to suffer when the next war comes.

ESTABLISHMENTS AND RETURNS

By R.A.M.C.

ACCORDING to the Note which first greets the eye on taking up " War Establishments," this series of publications contains information that must not be communicated to the outside world ; and in discussing matters connected with their contents I have been careful to take heed of this warning. I am liable, however, to the charge of attempting to make them more intelligible to the reader. In endeavouring to discuss some points in connection with establishments and returns, my criticism is friendly and well-intentioned, offered with the desire to enhance their value to those who have to deal with them, and to bring to the notice of the younger generation of administrators the need for a constant effort towards simplicity. Let us create oases in that vast paper desert which invariably stretches out towards the base of an army in war.

My limited experience of war service on the paper front does not qualify me to write on it, though the Corps to which I belong comes in for its fair share of duty there ; but no man, be he doctor or driver, can serve in the army for twenty years with eyes and ears open, and not hold definite views on matters of minor reform. Everyone realises, though it may not be admitted, that returns and paper transactions are indispensable to a civilized army ; but it is now, with the experience of the war still in our minds, that we should instil the blessings of statistical simplicity into the younger men. In the paper arm of future war, let us start with minimum loads and simple equipment.

STANDARDIZATION.

Viewing the paper forces impartially, there appear to be two separate methods of marshalling them. One is by " officers and other ranks " ; the other is " total strength," commonly referred to as the " ration strength." Returns are inclined to the first method while establishments use the second. I suggest that one method only be used throughout the army, and that is the first—officers and other ranks shown separately. It is the most useful figure, and the ration strength can be got quickly by simple addition, whereas ration strength alone gives no indication of the officer strength. My point is this. The officer and the man, on consideration, will be found to exist as two distinct entities. They seldom

come under the same dispensation. For embarking purposes, for en-training, billeting, re-inforcing, recruiting, even in hygiene questions, both require different administration. In administrative matters they rarely coincide, save in the single question of feeding. For these reasons, then, it is urged that the "officers and other ranks" method of classification be adopted and standardized throughout the whole statistical organization. It may seem a trifling matter, but it is best to get these trifles put straight in time of peace and not wait for the next war.

ESTABLISHMENTS IN ROUND NUMBERS.

The reader of "War Establishments" will observe that there are almost no units whose strengths amount to a round figure that can be remembered easily; they seem to total out at some figure like 998 or 492. Why have them thus—why not add on a few, or more likely subtract, and bring them into a simple round figure? The amount of memory work that this would save is enormous; candidates for examinations will probably welcome this. A war strength is rarely lived up to by a unit; on service, it becomes an ideal that is seldom attained; when attained it cannot be kept for more than a day. It may even become a source of minor disgruntlement; the unit is short-handed, the C.O. cannot spare anyone. If questioned he brings the "War Establishment" out of his pocket; there is the authorized strength, and he is ten men below it. A battalion can cover itself with glory although it is a few men under strength. Establishments need not be quite so absolute as we are inclined to make them.

Another problem about establishments is the matter of "total *excluding attached*" and "total *including attached*." In my own service with about one-third of the personnel from another Corps, it is difficult to form a mental picture of some medical units. Why have this "total *excluding attached*" figure at all—who wants it, and what does it signify? Most units have but two or three individuals attached; dealing in big numbers with a rapidly changing population, they do not seem to deserve the attention which they have to receive. Someone probably wants to know the "attached," but from my own experience I should say that someone has his own ways of finding out.

With regard to the broad policy to be adopted with establishments, then, I would suggest that the "officers and other ranks" method be employed, and that a serious effort be made to bring the "other ranks" into round numbers. Further, that the strength should be the "total *including attached*" figure, stated as officers and other ranks, and called simply "strength." In an infantry battalion, the attached are so few as to be negligible; in a medical unit they may be so numerous that their absence virtually emasculates the unit. It is unnecessary that individuals who have to work with these establishments in war should have their ideas blurred by cumbrous double totals of figures.

RENDITION AND PRO-FORMA.

One trouble about returns is that so many of them are tables of addition and subtraction. Mistakes in a sum set the whole office off on a false trail to lay the culprit by the heels, while the purpose of the return is temporarily forgotten. Out goes a general "strafe" to everyone, probably couched—in the words of *The Times*—in the bad English usual to the Government departments. "Instances recently have occurred of the non-rendition of pro-formas," or something equally atrocious. The man strong enough to abolish the words *rendition* and *pro-forma* will never be born in our time. Still, they give pleasure to the clerks in an otherwise drab existence; to abolish them would be like wresting the spanner from the hand of a mechanic.

The arithmetical pit-falls designed for the unwary compiler tend to drive the business part of the return into an obscure corner; and many returns do not state definitely what is wanted. A return should say plainly what it means; anyone looking at it should be able, for example, to visualize the compiler saying "I want two captains, four subalterns, six sergeants and thirty privates." Usually, however, the return if it could speak would drone on about authorized establishments and other side-issues, and not come to the point. Now, the man making use of such a return has a "War Establishment" in front of him; half the return may be taken up in supplying figures that are already known. This is a matter to guard against when trying to prepare a new return. Be direct, do not ask for a sum unless it is required, give the compiler sufficient space in the columns for the number of figures that he has to insert, and do not ask for information that you already possess. You must approach a return with the mind of an officer wanting information, and not with that of a clerk.

SECRECY.

A matter that impressed me during the war was the need for keeping apparently innocent returns under lock and key. This requires to be better realised, especially in services and departments which may not be so well equipped for the safe custody of documents as a general staff office. It is indeed false economy to skimp the services in safes, and it is sound policy to impress upon them the need for secrecy. Take, for instance, a return of men inoculated against enteric fever in a division. Of what interest, one may ask, is it to the enemy? Only this: the return gives the strength of each unit and the composition of the division. The enemy agent may not be interested in the "percentage inoculated," but the first columns of it constitute a correct Order of Battle that is a veritable gold-mine to him.

It is probable that the returns of other services contain military information; they would be of little use if they did not. Co-ordination and control of all statistical information is therefore indicated, and I

think that existing regulations do not attach sufficient importance to the need for secrecy in every war-time return. On the other hand, there is a tendency to keep returns in water-tight compartments. One directorate may be calling for returns when all that is wanted is in the office of another directorate next door. This stresses the importance of having a statistical office for all branches, and for more *liaison* between the possessors of returns.

With regard to returns likely to be required on a future occasion, it is well to remember that much additional information will be asked for soon after the opening of a campaign, and it is impossible to foresee what that will be. Therefore, begin with as few as possible and increase only as the need arises. Before initiating a new return, find out whether the information required is not already furnished to another office. The medical service, for instance, may have strengths, etc., that are wanted by other services also.

INTER-COMMUNICATION AND RETURNS.

What was necessary in the past may be redundant in the future; like everything else, returns are affected by the march of science. In the time of the Peninsular War, when the country went into a flutter of excitement on the arrival in Whitehall of an officer bearing important despatches from the Duke of Wellington, and prepared itself for the announcement of another glorious victory, heads of departments awaited with eagerness the returns that probably accompanied despatches. At that time returns were everything; to-day, however, the case is altered. What has happened?

The advances made in inter-communication, chiefly through the employment of wireless and the telephone, have reduced the return from news to history. Its function is now confirmatory; the telephone may have been indistinct. The "pro-forma" was emasculated when the War Office exchange rang through to the bases, general headquarters, and formations in France. With a high command in telephonic communication with the expeditionary force, the return merely repeated, what was 'phoned two days previously. The army may be engaged at a greater distance from London; even so, wireless has progressed enormously since the armistice. This point requires to be considered. The rising generation of administrators will do well to take the wide view on these various matters regarding the rendering of all statistical information; clear thinking and modernized ideas are necessary. Though returns are essential and no organization can do without them, they must keep their place and not grow arrogant. The clerical staff exists to assist the officer; he must not become its tool.

Note.—Correspondence is invited from all three Services on this Subject.—ED.

THE ARMY'S AIR NEEDS

By LIEUT.-COLONEL F. A. PILE, D.S.O., M.C., p.s.c., Royal Tank Corps.

IT is usual to hear, at the close of any conference, complimentary references to the excellent co-operation that exists between the Army and the Royal Air Force. So much so, that we are generally lulled to contentment, and we go away satisfied that here, at least, perfection has been attained. This is literally a true state of affairs, and, if we consider our only four Army co-operation squadrons, it must be allowed without cavil that not only are they excellent, but that they do co-operate to the best of their ability, or rather to the degree allowed them by the rules laid down by the Air Council and the demands made on them by the Army.

Now it has been prescribed that, at the beginning of a war, the Government will decide whether its policy is to win the war in the air or on the ground. In fact, the Government will decide whether the Army or the Royal Air Force will be the predominant partner. But, whether the Army is predominant or not, four Army co-operation squadrons are not the sum total of Air Force units that will be working in the interests of the ground forces.

Long-distance reconnaissances will be carried out by day bombing squadrons. It is generally known that the reconnaissance reports sent in by these squadrons last manoeuvres, were far below the standard of the Army co-operation squadrons reports. And for this circumstance the squadrons certainly cannot be blamed. They had not previously worked with the Army, and their officers had not attended any courses at the School of Army Co-operations, Old Sarum. So that many of their reconnaissances which had been made at considerable risk in bad weather, were quite valueless. The principal rôle of these squadrons is still day bombing, and for that reason they see little or nothing of the Army.

But, according to the rules laid down, if and when the Army becomes the predominant partner in a campaign, these squadrons will be allotted all their tasks under instructions from the G.O.C. of the ground troops. Yet the allotment of bombing objectives is as difficult and skilled a task as is the allotment of bombardment tasks to the artillery. No general in the Great War would have rested content to leave the selection of bombardment tasks to his C.R.A. Still, in any future war he will be forced to leave the selection of objectives to be bombed to his Air Force adviser,

because he gets no practice in selecting them in peace time—nor does he become really conversant with the possibilities, the powers and limitations of the aerial weapon.

This whole question of day bombing requires the closest consideration by the General Staff. Is it in fact possible to carry out extensive bombing raids by day? The French, after 12th October, 1916, never sent any day bombing raid more than forty-five miles over the line.

We are to-day in some respects behind where we stood in 1918. We are content to regard Army co-operation as of two kinds, and only two :—

(a) Reconnaissance.

(b) Artillery co-operation.

And even in reconnaissance we have not advanced. We carry out close and medium distance reconnaissance and occasionally a D.H.9a (day bomber) is sent to do a long distance reconnaissance on manœuvres, when the sides are only, at most, fifty miles apart. No true attempt at ground reconnaissance has been made.

To the Tank Corps this question of ground reconnaissance is vital. The normal tactics of that arm seem more and more trending towards independent action, and wide turning movements. This form of attack was attempted last year on manœuvres, when the attack was unsupported by artillery and had no air force allotted to act as its eyes—so it failed. Yet in 1918 No. 8 Squadron carried out ground scouting for the tanks ordered to cross the River Serre, and so accurate was their report that all the tanks except one succeeded in crossing the stream, and that one failure was due to the tank leader attempting to cross where he was advised not to do so.

But ground scouting can be carried out from an aeroplane, though it may at times be necessary to fly as low as 1,000 feet. At this height it is quite possible to report on the obstacles to tank movement, and the value of such a report needs no comment. The danger to the aeroplane, too, is not prohibitive. We are very apt to consider that every plane that flies under 3,000 feet has been shot down. During the war innumerable planes crossed the lines well under 1,000 feet without suffering any harm. Indeed a pilot flying very low—200 feet for example—is safer than one flying at 3,000 : his angle of change is so much larger that almost every shot fired at him goes behind.

This ground scouting by aeroplanes can only be carried out by pilots who are thoroughly intimate with tanks and with the obstacles they fear. For six weeks prior to the battle of the 8th August, 1918, in which No. 8 Squadron R.A.F. was to support the tank attack, the officers of that squadron lived with the Tank Corps. They took part, on the ground, in all practice attacks, and Tank Corps officers observed the battle from the air. So that by the 8th of August co-operation was real and not a sham. This method is even more essential to-day, when the bulk of

R.A.F. officers are not soldiers, and when the tank battle is likely to range over far wider areas.

Lastly, in March, 1918, the R.F.C. was turned on to stem the advance of the Germans by low flying attacks. This use of aircraft has often been criticised by senior R.A.F. officers, on the grounds that it allows the enemy to obtain the upperhand in the air, and that as a consequence the work of the Army co-operation machines becomes increasingly difficult. Ludendorff has stated that these low flying attacks were very disturbing to infantry, and that cavalry suffered very heavily from them. Anyone who has ever been machine-gunned from the air will agree with Ludendorff that it is "disturbing."

An aeroplane is only a vehicle into which a gun and a man can be put. Its rôle in war differs not, in principle, from the tank, the horse or the mule. It is only of use in that it places a man where he can see or where he can shoot or bomb his enemy with better advantage. If, then, this vehicle on occasions can be better employed than any other vehicle in assisting tanks to knock-out anti-tank guns, or in machine-gunning victorious infantry, then either the squadrons must be withdrawn from their watch aloft, or else the Army must have its own low flying squadrons. In either case there will have to be adequate practice in co-operation in peace time.

This whole question of the intervention of aircraft in the ground battle requires serious consideration.

With tanks there is no question, as the war records prove, that low flying machines are a most valuable—the French say "essential"—safeguard against hostile anti-tank guns. In defence, the half-inch or one-inch machine-gun mounted in an aeroplane, is capable of knocking out a tank, and these machines could be concentrated on any portion of the front very rapidly. At present no practice in this form of co-operation takes place, although in the manoeuvres of 1925 two fighter squadrons did attempt to take part in the battle of Quarley Hill. These squadrons were on opposing sides, but it was a liberal education to watch the impartial manner in which they both attacked the Aldershot troops who were assaulting the Hill.

It is, of course, amazingly difficult to co-operate effectively even with other arms of the same Service, but for different Services to hope to co-operate on the field of battle without a great deal of previous training and experiment seems somewhat futile.

NAVAL REVIEWS

MILESTONES IN WARSHIP DEVELOPMENT

By COMMANDER C. N. ROBINSON, R.N.

IN regard to gatherings in unusual numbers of warships at one of the Home ports for what is vulgarly called a Naval Review, these fall into three categories. Firstly, there have been assemblies in preparation for war, when an inspection or review has been made by the reigning monarch or some other person of authority. Secondly, there have been exhibitions of fleet tactics, or naval gunnery, or of some new weapon or method for using it. Thirdly, there have been pageants held to commemorate an event in connection with the Royal Family, the visits of distinguished Dominion or Foreign guests, or the arrival of a Foreign squadron. Of course, these categories might be again sub-divided; or, on the other hand, there could be found reviews or inspections appertaining to more than one of them, but for all practical purposes the division will serve.

Examples of the first class of reviews may be found in many periods of our history, without taking into account such occasions as those when the King led the Fleet in person, like Edward III did in 1340, at Sluys. Henry VIII, in July, 1545, visited his Fleet at Portsmouth, and even witnessed from the shore an engagement with the French Fleet at Spithead, in which the "Mary Rose" was sunk. In 1664, King Charles II inspected the White Squadron under Prince Rupert, just prior to the second Dutch War. The sailing of the Fleet, under Napier, for the Baltic in March, 1854, for the war with Russia, was witnessed by Queen Victoria, in the yacht "Fairy."

The last departure of the kind at which an inspection took place was, of course, that on 20th July, 1914, when His Majesty King George led to sea from Spithead the Fleet under Admiral Sir George Callaghan, which had been mobilised for exercises in the Channel, and which, only nine days later, left Portland quietly and without ceremony for its war stations in the North Sea, there to become the Grand Fleet under Admiral Sir John Jellicoe.

EARLY MIMIC ENGAGEMENTS.

In the second category, special exhibitions of new material in the Fleet, there may be mentioned the visits made, by Charles II and the

Duke of York (James II), to the ships in the Thames and at Spithead on various occasions. England owed a great deal of the strength of her Navy in those times to the practical interest of these monarchs. William III, during a visit to the Nore in 1692, went on board the "Victory," the flagship of Sir John Ashby.

Naval displays seem to have gone out of fashion under Queen Anne and the early Georges, but George III constantly visited his Fleet. He reviewed the ships at Spithead on 22nd June, 1773, when, in the course of a four days' visit, he dined on board the "Barfleur," flagship of Vice-Admiral Thomas Pye, upon whom and other senior officers he conferred knighthoods. In 1781, King George inspected at the Nore the Fleet of Vice-Admiral Sir Hyde Parker after its return from the Doggerbank; and on other occasions he was with his ships at Plymouth and elsewhere, going also for several short cruises during his sojourns at Weymouth.

The Fleet under Lord Howe, after the Glorious First of June, arrived at Spithead with its prizes on 15th June, 1794, where King George, with his family, went round the Fleet in barges, boarded the French prizes, and presented Lord Howe with a jewelled sword on board the "Queen Charlotte."

Sometimes these exhibitions took the form of a sham fight. Perhaps the earliest known example of this was in the reign of Edward VI. In His Majesty's Journal, printed in Burnet's "History of the Reformation," reference is made to the representation of a naval action in the Thames on the occasion of the King's visit to Lord Clinton, then Lord High Admiral, on 19th June, 1550. Another example of the kind was the visit of William III to his Fleet in 1689, after the battle of Bantry Bay, when he proceeded on board the "Elizabeth" and knighted Admirals Shovell and Ashby. He afterwards witnessed evolutions by the ships.

Exactly a century later, on 18th August, 1789, there was an interesting affair of the kind off Plymouth. Going there after his annual visit to Weymouth, George III embarked in the Sound on board the "Southampton" frigate, and when this vessel had weathered the Mewstone, "she descried the Fleet, and fired one gun," says the reporter for *Woodfall's Register*, of 21st August, 1789. The view was described as beautiful beyond measure, over a hundred vessels, sloops and yachts being in motion. Forming into two divisions, the Eastward, under Commodore M'Bride, in the "Cumberland," and the Westward, under Commodore Goodall, in the "Director," the forces manœuvred to bring each other to action, which they did with a furious cannonade, to the great delight and pleasure of the Monarch and his family. This is pictured in the *Register*, probably the earliest illustration of a sham fight before Royalty.

At a review of the Fleet by Queen Victoria after the Russian War, the ships put to sea in two squadrons to carry out tactical manœuvres. A sham fight also took place between the Spithead forts and a gunboat flotilla, which is depicted in a Baxter print. More recently, there is the visit of King Edward VII to his Fleet in the Solent in August, 1907, and His Majesty's cruise on board the "Dreadnought" to witness target practice. The visits of inspection made by King George V, himself a naval officer, have been as numerous as they have been thorough. Soon after his accession, he inspected the Fleet in Torbay, in July, 1910, under Admiral Sir William May. Two years later, in Weymouth Bay, the King inspected the Fleet under Admiral Sir George Callaghan, when for the first time aircraft were present under Commander C. R. Samson. It was on this occasion that the King went for a submerged run in Submarine D.4.

CEREMONIAL REVIEWS.

Prominent among the displays in the third category are the Coronation and Jubilee reviews. Of the review on the occasion of Queen Victoria's Jubilee, in 1887, Admiral of the Fleet Sir Edward Seymour, then Captain of the "Inflexible," has said that it stirred the nation even more than the Diamond Jubilee Review of 1897, because it was much more of a novelty to everyone.

Of pageants occasioned by the visits of Foreign rulers mention should be made of that in 1814, in honour of the visit of the Allied Sovereigns. The Prince Regent, accompanied by the Dukes of Cambridge and Clarence, the King of Prussia, with the Princes William and Frederick, and the Emperor and Empress of Russia, with the Duchess of Oldenburg, inspected in their barges a Fleet consisting of fourteen ships of the line and thirty-one frigates and sloops, which afterwards went through a series of movements under sail. The flagship of the Fleet was the 98-gun ship "Impregnable," which afterwards became the first of the series of boys' training ships of this name at Plymouth. An interesting incident at this display was thus described in *The Times* :—

"During the review the King of Prussia was struck with the appearance of a barge of the "Rodney," ship-rigged, sailing through the Fleet, and requested her as a present of the Prince Regent. His Royal Highness immediately consented, when the King, turning round to the Regent and Emperor, facetiously observed: 'I hope you two heads of great maritime nations will not be jealous of my navy.'"

Other fleet inspections in connection with the visits of foreign rulers took place in 1867, in honour of the Sultan of Turkey; in 1873, for the Shah of Persia; and in 1889, when the Kaiser brought over a German squadron. Notable visits of foreign squadrons also included those of

the first French ironclads under Admiral Bouet-Willaumez, in 1865; the Austrian ships under Admiral von Hinke, in 1890; the French under Admiral Gervais, in 1891; the Italians under the Duke of Genoa, in 1895; and the French under Admiral Caillard, in 1905, whose reception by King Edward VII firmly established *l'entente cordiale*.

It very often happened in the early days of these visits of ships of other countries that they resulted in some improvement or development in shipbuilding. Thus, in 1672, the French brought a squadron to Spithead to assist us against the Dutch, and one of them, the "Superbe," was taken, says Pepys, as a model for twenty new British vessels.

Then again, nearly two centuries later, in 1844, the French paddle frigate "Gomer" was brought to England by Louis Philippe, and visited by Queen Victoria. As a result of the impression created by that vessel, which had been launched at Rochefort in 1841, we built, in 1845, the "Terrible," a steam frigate to the designs of Mr. Lang. Similarly, the visit of the U.S. ship "Miantonomoh," after the American Civil War, had its effect upon the design of the British turret ships, including the ill-fated "Captain,"¹ which foundered off Finisterre with heavy loss of life on 7th September, 1870.

FOR EMPIRE VISITORS.

A feature of the naval displays which have marked the visits to this country of Dominion and Colonial representatives has been their movement. The idea has been rather to exhibit the Fleet at work, so far as this can be done in the space of a few hours, and, therefore, ships in motion, and tactical evolutions, have been preferred to lines of stationary vessels calculated merely to impress by their pageantry and latent might. The earliest of these Dominion displays was in August, 1886, when torpedo boats, then the latest type of war craft, made an attack upon the battleship "Colossus." The "Colossus" was the first commissioned ship to be armed with 12-inch breech-loading guns, and the first to be lighted throughout by electricity. The Colonial Conferences in 1897, 1902 and 1911 coincided with the Diamond Jubilee and Coronation reviews.

On 3rd May, 1907, in connection with the Conference of that year, the Dominion Premiers spent a busy day at Portsmouth. They first inspected the "Dreadnought," then newly-completed, and from her upper deck witnessed an attack by destroyers and submarines. Next Whale Island was visited; here a mimic attack was made by landing parties, who were finally driven off by the arrival of an armoured train. Then the visitors were embarked for an inspection of the Home Fleet at Spithead, a force which had been organized but a few weeks, but in which lay the germ of the Grand Fleet of 1914-19. The Dominion visitors were also present at a review by King Edward in July, 1909.

¹ A model of this ship is to be seen in the R.U.S.I. Museum.

The first display after the war at Spithead was that in connection with the Imperial Conference of 1923, which is too recent to need more than passing reference. The Dominion guests were embarked in the "Princess Margaret," minelayer, and after an inspection of the Atlantic Fleet, of which Vice-Admiral Sir E. S. Alexander-Sinclair was in command in the absence, owing to an accident, of Admiral de Robeck, the squadrons and flotillas steamed past in cruising formation, and evolutions at high speed were carried out by the destroyers. Owing to the bad weather, aircraft were unable to take their allotted part.

Other examples of fleet inspections and naval reviews might be cited. But chiefly, it may be said that they have been of interest and value for the opportunities they have offered for the stocktaking of our sea strength and progress. Each succeeding review has marked a more or less definite stage in warship development, and, generally, it has also been an exercise in mobilisation; moreover, they always serve as useful propaganda for stimulating public interest in the Navy.

VICTORIAN REVIEWS.

For the Jubilee Review of 1887, every available vessel at home was brought out and commissioned, and every available man and boy. As a maritime spectacle the event was all that could be desired, but regarded as a demonstration of naval strength, it was a woeful exhibition. On the other hand, the show was, of course, well stage-managed, and the authorities took every care that it should be well advertised. This Review coincided with the agitation preceding the passing of the great Naval Defence Act, and with the introduction of the annual naval manœuvres, which were fully described by competent news correspondents and caused much discussion. The Jubilee Review may, indeed, be said to have marked the beginning of the naval revolution, the advent of which was heralded a few years earlier by the "Truth About the Navy" in the *Pall Mall Gazette*, and eventually resulted in the rehabilitation of our sea strength.

The earlier reviews of the eighteenth and nineteenth centuries did not exhibit those changes in naval architecture and equipment which have been so prominent a feature at later gatherings, but from 1887 onwards, each successive assembly has made manifest innumerable, astounding and radical developments in every direction. The more important of these steps in the ladder of progress may now be briefly passed in review.

The first naval inspection attended by Queen Victoria was in 1842, when her Majesty came to Portsmouth and went on board the 120-gun ship "St. Vincent," a noble old vessel dating from 1815. Next day, 1st March, 1842, Her Majesty visited the first three-decker launched in her reign, the "Queen." The largest gun in the "Queen" was the 68-pounder smooth bore, and the smallest the old 32-pounder, which

had been used at Trafalgar. Three years later, the Queen inspected the Experimental Squadron under Admiral Sir H. Parker, in which was the first screw steamer built for the Royal Navy, the sloop "Rattler," launched at Sheerness in 1843. Not until 11th August, 1853, was there another review, when relations with Russia were becoming strained. Of twenty-five ships present thirteen were screw-propelled, nine were paddle-driven, and three relied on sail power alone. The crack ship was the 131-gun three-decker "Duke of Wellington," and the largest weapon mounted at that time was the smooth-bore 10-inch shell gun, firing an 84 lb. projectile, but mainly the ships were armed with 32 and 68-pounders. Seven months later, when the Queen reviewed the Fleet bound for the Baltic under Napier, as mentioned earlier, its composition was much the same, except that all the ships were steamers, and there was present the venerable "Ajax," built in 1809, but now remodelled and fitted with a screw.

Much more magnificent was the review after the Russian War, in 1856, when no less than 240 pennants were flying, twenty-four by ships of the line, nineteen by screw frigates, eighteen by paddle steamers, five by floating ironclad batteries (the first appearance of armoured vessels), and 120 by steam gunboats. Only one sailing ship was there. The eleven years which elapsed before the next important review, in honour of the Sultan, on 7th June, 1867, showed substantial progress. There were in line forty-nine vessels, of which fifteen, moored in one great column, were ironclads, headed by the "Minotaur," which had not long been commissioned, and which was of 10,690 tons, armed with 12-ton muzzle-loading guns.

Six years later, on 23rd June, 1873, the Prince of Wales (King Edward) and the Shah of Persia were shown the Channel Squadron, and of the ten ironclads present the newest was the "Devastation," and the oldest the "Black Prince." The "Devastation" had been completed that year, and was of 9,330 tons, armed with four 12-inch 35-ton muzzle-loaders. The "Black Prince," completed in 1862, was, with the "Warrior," the first sea-going ironclad in the Royal Navy, and had four 8-inch 9-ton muzzle-loaders. The feature of this 1873 Fleet, looking back, was its heterogeneous composition, the ironclads being of various sizes and types. And no fast cruisers had yet taken the place of the old frigates.

The review of 13th August, 1878, was a war display, held in connection with our preparations in case of war with Russia. The "Hercules," flagship of Admiral Sir A. Cooper Key, led the starboard line of broadside ironclads; and the "Thunderer" led the port line of eight turret ships. Two vessels, the "Vesuvius" and "Lightning," were equipped with torpedoes only, and two Yarrow torpedo boats, a great novelty, attracted much attention as they darted about between the big ships at high speed. The best gun afloat in this Fleet was the

38-ton muzzle-loader, able to perforate $17\frac{1}{2}$ inches of iron at very short range. By the time of the next Review, at the Jubilee in 1887, the 45-ton breech-loading gun had come in, able to pierce 22 inches of iron. Many vessels then in the line were fit only for port defence, but there was one new armoured cruiser, the "Imperieuse," which thirty years later was a depot-ship at Scapa during the Great War. Six training brigs may be said to have represented the old sailing Navy.

A much better Fleet was got together in 1889 in honour of the visit of the Kaiser, when among thirty-five battleships, five of the "Admiral" class were new and homogeneous, and seven mounted B.L. guns. But the Fleet lacked fast cruisers and torpedo craft. His present Majesty, then a Lieutenant, R.N., had command of a torpedo boat at this Review. It remained for the Diamond Jubilee of 1897 to bring together the finest Fleet ever assembled in British waters up to that time. Homogeneity had increased, six "Majestics," four "Royal Sovereigns," and the "Renown" being in the line of battleships. Coast defence ships had gone, and only two muzzle-loaders remained. There was a good showing of cruisers, the outcome of the Naval Defence Act; and also some twenty-seven small cruisers. The torpedo craft included twenty torpedo gunboats (or torpedo boat catchers, as they were first called), and thirty destroyers (which were destined to take the place of the former), including eight 30-knot boats. It was at this Review that the Hon. C. A. Parsons brought down from the Tyne his vessel, the "Turbina," the first to be fitted with the steam turbine he had recently designed. The best weapon was the 46-ton wire-wound gun of the "Majestic" class, able to pierce over 36 inches of iron.

KING EDWARD'S REVIEWS.

Five years later, a further stage of progress was exemplified at King Edward's Coronation Review, when the flagship of Admiral Sir Charles Hotham, Commander-in-Chief, was the "London." In this type, the speed was raised from 17 to 18 knots, and the principal guns, although of the same (12-inch) calibre, were 50-ton weapons of greater power and velocity. The "Sutlej" represented the latest word in cruisers, carrying two 9.2-inch and twelve 6-inch guns at a designed speed of 21 knots. There were seventeen torpedo gunboats, thirty-two destroyers, and seven torpedo boats. Wireless telegraphy had come into definite use, and several ships were fitted with it.

Of a special nature was the Review of the newly-formed Home Fleet by King Edward on Saturday, 3rd August, 1907, inasmuch as this force, under Vice-Admiral Sir Francis Bridgeman, was but a portion of the Navy in home waters. In interest and variety, however, the Fleet outclassed all previous assemblies. At its head was the "Dreadnought," the first all-big-gun, turbine-driven battleship which was destined to give her name to a host of vessels the world over.

Armoured cruisers were well represented, and for the first time at such a display there was a line of submarines, shepherded by the "Bonaventure" and "Forth." A group of "scouts" of the "Sentinel" and "Pathfinder" class foreshadowed the flotilla leaders of a decade later; and much interest was also shown in the line of auxiliaries, the distilling ship "Aquarius," the minelayer "Iphigenia," the depot-ships "Hecla" and "Tyne," and so on. The review set the seal of royal approval on the early stages of the transformation of our naval power from the Mediterranean to the North Sea.

The most eventful year from the standpoint of naval displays was probably 1909, which saw the agitation for eight "Dreadnoughts" and the awakening of the Dominions to assist in the provision of new ships. On 12th June, the Home and Atlantic Fleets were inspected at Spithead by the Admiralty Board and a number of guests connected with the Imperial Press Conference. From 17th to 22nd July, the Fleets were in the Thames, during which time the Lord Mayor of London paid an official visit to the "Dreadnought" and other ships at Southend, and detachments were stationed all up the river—cruisers off Gravesend, Greenhithe, Erith, etc., scouts at Greenwich and Rotherhithe, destroyers at the Tower and London Bridges, torpedo boats along the Embankment, and submarines off the Houses of Parliament. Then on 31st July, 1909, King Edward reviewed the Fleets in the Solent, when Dominion and foreign guests, Members of Parliament and others, witnessed the event from the White Star liner "Adriatic." At these 1909 displays, battle-cruisers of the "Invincible" class appeared for the first time. Two years later, at the Coronation Review of King George V, a larger and more powerful Fleet was at Spithead. The "Neptune" had replaced the "Dreadnought" as flagship, the first cruisers of the "City" class had been completed, and new types of torpedo craft were present, including two submarines of the "D" class.

REVIEWS OF THE PRESENT REIGN.

Almost each year since his accession, H.M. King George has visited his Fleet, though not always to hold a review. As a sailor himself, "educated and trained in that profession which I love so dearly," as he said in his letter to the Navy on coming to the Throne, it is natural that he should prefer visits of inspection to the Fleet at work rather than the more prosaic and formal pageantry of the old style of review. Passing briefly over the principal visits of this kind, to which some reference has already been made, it may be recalled that other reviews were held for special purposes. On 9th July, 1912, there was an "Official Visit of the Houses of Parliament to the Fleet at Spithead," the legislators being taken round the squadrons and flotillas in the "Armada Castle." It was at this review that the "Lion" made her first appearance, as flagship of Rear-Admiral Lewis Bayly; and the

13.5-inch gun battleships present were the "Thunderer," "Orion" and "Monarch." The presence of five minelayers and of no less than 106 destroyers showed the change which was coming over the composition of the Fleet, the torpedo craft representing numerically just one-half of the total of 223 vessels present.

The greatest assembly of the Fleet which Spithead has ever seen was that from 15th to 20th July, 1914, following the test mobilisation. This was substantially the force which the Empire relied on at the start of the War. Since the previous display two years earlier, the "Iron Duke" class of battleships had been completed, and later battle-cruisers, including the "Queen Mary." Destroyers of the "L" class formed a group by themselves; and submarines of the "E" class were also in the lines. The chief novelty, however, was the seaplanes, which were moored off Haslar. In addition to these, seaplanes from Calshot, Grain, Dundee, Yarmouth and Felixstowe, and aeroplanes from Eastchurch, manœuvred over the Fleet. The Director of the Air Department, Captain (now Rear-Admiral) Murray Sueter, and his assistants were on board the "Niger."

AFTER THE GREAT WAR.

The post-war displays have been four in number, including that just held for the benefit of the Dominion Premiers. In July, 1919, in connection with the celebration of the peace, there was a Parliamentary visit to the Fleet in the Thames, when Admiral Sir Charles Madden was in command. The principal ships were the battleships of the "Queen Elizabeth" and "Royal Sovereign" types; the light cruisers "Comus" and "Carysfort"; the aircraft-carrier "Furious"; and five destroyer and four submarine flotillas. A large proportion of the vessels had been built or completed during hostilities, and a display which was probably unique on an occasion of the kind was given by coastal motor-boats.

On 3rd November, 1923, the Dominion Premiers inspected the Fleet at Spithead, when the principal ship present was the "Hood"; and on 26th July, 1924, the King reviewed there the Atlantic and Reserve Fleets, prior to the transfer of certain squadrons of the former to the Mediterranean. These assemblies differed from that of 1919 rather in what they had sacrificed in the way of older ships than in any gain of new vessels, but "M" class submarines were present for the first time, and the aircraft-carriers "Argus" and "Hermes." The 1924 Review was notable in that no ship present had taken part in the inspection in the same waters just ten years before, and for the complete service of Fleet auxiliaries present. The latter included high-speed minelaying craft, vessels specially equipped for Fleet target service, instructional craft attached to the anti-submarine school, a water-carrier and destroyer repair ships. A prominent feature, too, was the war-built minesweepers, both twin-screw and paddlers. If, too, the main classes of fighting ships

appeared the same as in 1919, actually there were many improvements made since the War in the equipment or fittings of the vessels. The defective magazine arrangements which cost us dearly at Jutland had been remedied, and weak turret roofs strengthened. Bulges had been fitted to certain of the big ships for under-water protection, and the "Repulse" had been re-armoured.

During seventy years of these displays, the principal developments in the Fleet have been the changes from sail to steam and then from coal to oil as the source of motive power, and from oak to iron and steel for construction and protection. In more recent years they have witnessed the arrival of the submarine and the aeroplane, the most potent influences on modern naval warfare. Less conspicuous, but far-reaching in their effects, have been the technical developments. The advent of the torpedo has greatly affected both tactics and construction. Defensive armour, since its introduction, has changed both with regard to its distribution in the ships and in the quality of the material. The smooth bore muzzle-loader has been superseded by the rifled breech-loading gun, and round shot have given place to high explosive shell. Fleet communications have been revolutionised by wireless. No less remarkable an advance is found in regard to the personnel, organization, and administration—at the earliest Victorian review, for instance, there were no continuous service seamen, the men had no fixed uniform, while their dietary and pay were practically the same as before Trafalgar.

An exhibition of experimental gunnery and of concentrated firing, and of the defensive measures taken against aeroplanes and torpedoes formed an interesting display when the Dominion Premiers visited the Atlantic Fleet off Portland on 30th October, and must have impressed the overseas visitors and others who were privileged to witness it. Nor must the educational purpose of these reviews be forgotten. To the public they afford a reminder of the fact that the Navy has its duties in peace as in war; that it is, indeed, a guarantee of peace so long as it is maintained in an adequate and efficient manner. They also serve to show the return given to the taxpayer for his outlay upon naval defence. Nor can they fail to arouse in most people feelings of legitimate pride and patriotism. Professionally and technically, there are great advantages to be obtained from these gatherings. The exercise in staff work alone is useful, while shortcomings in mobilization and administration are revealed. There is a healthy spirit of emulation between the ships, and between one squadron and another, and opportunities are afforded to officers to see for themselves any novel weapons or new appliances and methods connected with the complicated mechanism of modern naval warfare.

THE NAVY AND THE PUBLIC SCHOOLS

By COMMODORE HIS GRACE THE DUKE OF MONTROSE, C.B., C.V.O., V.D.,
R.N.V.R.

On Wednesday, 6th October, 1926, at 3 p.m.

THE RIGHT HON. WILLIAM CLIVE BRIDGEMAN, M.P. (First Lord of the
Admiralty), in the Chair.

THE CHAIRMAN, in introducing the Lecturer, said : With regard to the subject of this lecture, we shall all of us, probably, entertain different opinions. I, for one, at any rate, am here only to keep the ring and not as a partisan of any particular view at the present moment. The subject of the recruiting of officers for the Royal Navy is one which is of vital importance to the Service. It is one which I have tried to study as carefully as I could since I have been in my present position. I think probably it has more bearing on the future of the Navy than any other subject. It is full of difficulties, but I have always held the view, after a very careful study of public school life and many other branches of life, that more depends on getting the right man for any job than upon anything else.

I have no doubt that many views will be expressed, and I myself, and I am sure many of the audience, will be interested to hear what is said in the discussion which will take place after the lecture.

LECTURE.

Mr. Bridgeman, Ladies and Gentlemen—These are the days when some people talk of Revolution and others of Evolution, but whichever way you regard it, the one thing that is certain is that nothing in human progress stands still. Change is always taking place, and where it does not, to quote the late Admiral Lord Fisher, "Not to go forward is to go back." To remain stationary with everything else moving on, and yet to maintain the relative position, is impossible. Unfortunately, it is usually a most ungracious task to suggest changes or improvements in existing institutions. Therefore, I expect ample criticism in putting forward suggestions for altering the present system of entry of young officers into the Navy, but I do most sincerely hope that I shall not be accused of belittling the splendid work done by the "Britannia" in the old days or by Dartmouth Naval College in more recent times.

These establishments have turned out the finest naval officers afloat, and each has served its generation well. But to maintain that on that account it is not permissible to suggest any possible improvement is to

adopt the attitude of the gallant old seamen of seventy and eighty years ago who stoutly argued that because Britain's proudest days afloat had been under hemp and oak it was very wrong for the Navy to turn to steam and iron.

I trust, therefore, that I will be acquitted of the charge of reading this paper in a spirit of carping criticism. My object is to consider whether changed conditions do not now permit and demand an improvement on the old methods that have served us so well in the past.

To begin with, there is the matter of economy, and I make no excuse for putting this reason for change before all others. The present heavy taxation not only cripples the country, but cripples the naval Service also. Every penny saved in one direction permits of expenditure in another, and this can be directed to give increased efficiency to the whole. However gratifying it may be to witness the development of the spirit of the League of Nations, and to know that international agreement and arbitration gain strength day by day, it is still too early to anticipate reasonably the scrapping of all armaments. Perpetual good fellowship and mutual trust under all circumstances between nations has still to be worked for as an ideal which we may one day reach, but in the meantime while we are obliged to preserve a defensive naval Service, it is only right that searching examination should be made in Parliament of every pound included in the estimates. Economy is the prime need and every development in the future must be financed from within the present estimates and not by adding to them.

I feel very strongly that the scheme which I am about to advocate has both advantages, i.e., increased efficiency and increased economy, and that it will provide all that is necessary to-day for the practical training of young officers.

Dartmouth Naval College carries on the traditions and work of the old "Britannia" which was founded in 1859 as an improvement on the methods which had been in vogue until then for the entry and training of naval officers. Prior to the "Britannia" young gentlemen went to sea in ships as novices, and except in the cases where the captain took a personal interest in the youngsters, they had to pick up their knowledge as best they could in very much the same way as is described by Marryatt. In matters of detail the system of entry and training has been improved year by year, almost term by term, but in the matter of root principles it is just the same now as it was in the days of Queen Victoria.

Boiled down to their essentials the root principles for the entry of officers by way of the "Britannia" and Dartmouth were :—

- (a) Catch him young ;
- (b) Mould him to naval pattern, and imbue him with naval ideas from boyhood.

To take the first principle of catching him young, I venture to state that this idea is based very largely on two factors, both of which are now obsolete. One is the recollection of the bad old days of the Navy, when it would have been impossible to get youngsters to sea at all had the naval authorities waited until the boys reached years of discretion. They caught them young, and by the time they had reached an age when they could really appreciate the hardships which they were undergoing, they had become inured, or it was too late to turn back and start life afresh. This is much the same in the British fishing fleets to-day. Boys are taken into the smacks and trawlers as soon as they have left school, and so they become inured to the hardships of the deep sea fisherman's life before they know of anything else. This system produces the finest seamen in the world, as witness their work in the war, but nobody ever takes to deep-sea fishing in days of maturity.

The second relates to days when parents decided what the son should become with very little reference to his own tastes in the matter. If the lad were destined for the Navy the sooner he got under naval discipline and training the better. As Captain Maurice Suckling said, when his nephew Nelson was put under his charge, "What has poor little Horatio done that he should be sent to rough it at sea? Let him come—if a cannon-ball takes off his head he will at least be provided for."

I venture to say that times have changed now, and that modern naval life compares favourably with the comforts of soldiering or any other profession entailing a good deal of living abroad, and that therefore the necessity of catching them young has largely disappeared. Further, there is now very considerable disadvantage in starting a boy on a definite career while very young. For—unlike the conditions that maintained in the Victorian age—the professions in civil life are now very highly organized and the demarcation between them is much more complete than it used to be. It is therefore very difficult to change over from one profession to another should necessity arise. The system of early entry to the Navy is apt to produce too many square pegs in round holes, and men find themselves out of the Service in early middle age with very little chance of earning a living and only a small pension to exist on.

Then there is the question of moulding the future officer to the naval pattern and ideas in boyhood and making them all more or less of "one cut." There is no finer pattern in the world, but in modern circumstances is it not better to allow some of a lad's natural character to form first? I know that it can be argued that the wardroom of a man-of-war is a very small community and that any striking instance of individualism is apt to make it uncomfortable and to promote friction. To this I would answer that a strong personality will make itself felt anywhere; also that the young officers who have already entered the Navy at a later age under the Special Entry Public Schools scheme have not so far caused any noticeable friction in either the gun-room or the wardroom.

Again, there is the disadvantage of very early medical examination and interview. Many boys suffer from mild defects at thirteen years of age and are rejected, but often are completely over their trouble at eighteen years of age, and so the Service loses a number of boys who would be among the best of officers. Both Lord Nelson and Field-Marshal Lord Roberts would as boys have been rejected by a modern Medical Board, but they both proved themselves of value as officers. It is easy to say "boys rejected for Dartmouth can come up again for examination under Special Entry," but we must not forget the adage "once bitten, twice shy," and so boys once rejected usually drift to other callings. Then it must be remembered that methods of instruction have enormously developed, and that now by specialisation and scientific courses and model gear, we can teach intelligent boys a great deal more thoroughly and rapidly than they did in days of old.

As for enthusiasm on Service matters being ingrained into the boys' nature while very young, I am bound to say that I have never found any lack of enthusiasm for a military life in the Army classes maintained by so many of the big public schools.

The special entry of cadets from the public schools was started in 1913, and gave lads the chance of entering the Service between the ages of 17½ and 18½. The shortage of junior officers was acute and threatened to become far more so as the demand increased with the rapid commissioning of more destroyers, submarines and other small craft. The transfer of a number of R.N.R. officers to the Supplementary List was a temporary measure at best and the Mercantile Marine could ill afford to spare them. It was absolutely necessary to tap a new source of supply, the public schools being the obvious one. The Admiralty was a little half-hearted over the scheme and spoke of a maximum of thirty entries for three years. But circumstances were too strong for this policy, forty-two were entered in the first year, and it was planned to enter sixty in 1914-15 when the war intervened and upset all preconceived schemes. During the war this system had to be expanded very rapidly to provide junior officers, particularly for destroyers and patrol craft. I myself was responsible, on behalf of the Admiralty, for carrying out the preliminary examination of a large number of Scottish boys from the public schools, and I am very proud of the successful record and gallantry of the young officers whose feet I first placed on the lowest rung of the Service ladder.

Naturally, the first question that will be asked is whether the public school cadets are in any way inferior to those entered by the Dartmouth system. I have put the question to many officers who have had to deal with both classes and, although they naturally have a bias in favour of the system in which they themselves learned their craft, they have been unanimous in their praise of the Special Entry Cadet. This is not a criticism of the Dartmouth boy, but an indication that the public school boy can do very well in the Service, and will not do anything to lower the

high standard of the Navy. When I was serving as fifth officer in the merchant ship "Hesperus" I was in charge of forty cadets under the training scheme which was established by Lord Brassey and Messrs. Devitt and Moore. Many of these cadets were public school boys from Rugby, Repton, Dulwich, Sherborne and the like, and to-day they are to be found in command of some of the largest liners afloat. After one voyage in the "Hesperus" these boys knew more about the sea and actual seamanship than any Dartmouth boy could possibly learn in all his time in the College. Their general education was quite up to the same standard and they were roughly the same age as any Naval Cadet.

There is another point of view, apart from the purely Service one, the importance of which cannot be denied, that is the parents' point of view. The snag which prevents many parents favourably considering the naval profession for their sons is the slow promotion and the small proportion of officers who attain the coveted brass hat and three stripes. Still bigger is the doubt as to whether the boy will really find his place in the Service. If he does not it means that he is badly handicapped for life by having had his education diverted into one special rut at the early age of thirteen.

With the special entry Cadet from the public schools this objection is not nearly as likely to apply. For one thing, at the age of seventeen he has a very much better opportunity of knowing his own mind, and the chance of his finding himself unsuitable for the Service is remote. For another, it matters very much less if he does leave the Navy after a short spell of service for he has already had a full education and can pick up the threads of civilian life with little difficulty. The expense of his education has rested almost entirely on his parents so that the State loses little by the retirement of a lad after a brief probationary service if found ill-suited for naval life.

To maintain the Naval College at Dartmouth costs the nation fully £90,000 a year net, after parents' contributions have been paid. Unless the number of Cadets under training is kept up to establishment the cost per capita to the State becomes excessive. On the other hand, it cannot be said that as many boys are being put forward by the public schools as might be desired, but I consider this to be the result of lack of interest rather than of any inability to send them. A short time ago, I wrote to the principal headmasters of public schools in the country to ask them whether they would assist in a scheme to form the naval equivalent of the Officers' Training Corps in their schools, in which training would be given for commissions in the R.N.V.R. With only one conspicuous exception the answers were in the negative. They said it would interfere with their existing O.T.C., they were too far away from water to interest themselves in naval matters, there was not enough to attract the boys to the sea Service as compared with the Army. I must confess that I was very bitterly disappointed to find that in this, the greatest maritime nation

in the world, there was only one public school willing to have a direct connecting link with the Navy, while all were willing to be associated with the Army.

With regard to this effort of mine it is interesting, although not altogether pleasant, to discover that the Americans have succeeded where I have failed. A short time ago the U.S. Navy Department approached several of the principal Universities in the country, and has now come to an agreement with five of them, including Harvard and Yale. These universities have agreed to found naval officers' training corps, the establishment of each being 200 lads from the age of fourteen upwards. These lads are to wear practically the same uniform as the Annapolis midshipmen, provided free of charge by the State. According to present plans there will be two courses. The junior course is to last two years and includes seamanship, drill, gunnery and elementary navigation. It is only after passing a searching efficiency test in this course that the boy can take the senior one, which includes the elements of tactics and naval science. Both classes will be eligible for fifteen-day cruises in men-o'-war and spells of training in naval camps ashore. The instructors are drawn from the list of naval officers who are on unemployed pay or who were "axed" after the war.

Personally, I have not the least doubt that this scheme will be a success, and that it will go a long way towards solving the difficulty of finding a large number of junior officers for naval service and especially to take command of the innumerable patrol craft that have to be commissioned hurriedly at the outbreak of war.

My object in referring to this American venture at some length is to point out that if the scheme is practicable in the United States it certainly should be practicable in some form or other in Great Britain, and that if the British public schools will establish naval officers' training corps, let us say as part of the Royal Naval Volunteer Reserve, the supply of cadets for the Royal Navy would automatically be improved. The existing public schools send a magnificent stream of cadets to Sandhurst and Woolwich, already largely prepared for their work by the Army classes and the Officers' Training Corps. The various headmasters have all written to me that they cannot consider forming naval O.T.C. or offering similar advantages to the boys desirous of entering the Navy. The obvious solution seems to be the foundation of a new public school which can. I have been considering this possibility for some years past, as has also Lieutenant-Commander W. S. Galpin, R.N., whose recent letters to *The Times* attracted considerable attention. I now want to show that there is no essential difficulty in bringing this project into practical effect.

I do not suggest the formation of a purely naval school; that would tend to increase the difficulties of the moment rather than to decrease them. What we want to see is the establishment of a public school with

a strong naval bias, just as so many of the existing ones have an Army bias. Wellington College is, of course, a striking example of this, and one cannot speak too highly of the work that it has done in keeping the Army supplied with a steady stream of cadets who are well imbued with the spirit of the Military Service, and who have already learned the elements of their profession.

Such a foundation would not be a surplus to the educational requirements of the country. All the public schools have long waiting lists at the moment, and recent experience with Stowe College shows that a new one established on careful lines has every prospect of immediate success. Therefore, there appears to be no reason for anxiety from the financial point of view. With the example of Wellington College before us, what better step could be taken than to found a Nelson College, a name happily suggested by Lieutenant-Commander Galpin.

For the purpose I put forward the somewhat startling suggestion that the Admiralty might perhaps be approached with a view to transferring Dartmouth to a properly constituted public school foundation, and that, in future, the Navy should look solely for its supply of young officers to all the public schools and colleges in the country, and should enter all boys as probationary midshipmen at the age of eighteen and a half. It is suggested that the Dartmouth College might be transferred at a price arrived at by mutual valuation.

Again, let me emphasise the point that Nelson College would not be a naval establishment, but a general public school with a naval bias. I would like to see preferential consideration however, or special scholarships granted in favour of the sons of naval and marine officers, the boys being educated for all walks in life. There would be a Navy class for those desiring to enter the Service, just as Army classes already exist in many schools for those desiring to take up a military life, and there would be a Naval O.T.C. The instruction in the Navy class would include the elements of navigation, seamanship, engineering, astronomy and the like, and courses in naval history, elementary tactics and other useful subjects would be arranged. The boys in the college would not wear uniform except when at drill in the Naval O.T.C., and it could be arranged that these cadets should attend the public schools camp annually or be embarked for a short cruise in H.M. ships instead.

By the time the boys have reached the age of eighteen and have completed their education the headmaster and house masters would render a report on the suitability of those boys desiring a naval career. These reports would be considered by the Admiralty, and the boys selected invited to attend the preliminary interview in company with other applicants from all the schools and colleges in the country. In no circumstances do I advocate the abolition or even modification of the preliminary interview, the Navy must in every case be fully and absolutely

satisfied with the material offered. This interview satisfactorily negotiated, the medical and entrance examinations would follow in due course.

These examinations passed, the boy would embark in a training ship for six months' instruction and probationary service. At the end of this period, which might be without pay, he would be required to pass an examination for confirmation of entry and rank, and at the same time he would be at liberty to withdraw if he did not care for the sea life or would, of course, be requested to withdraw if his superiors were not satisfied with him. There is no hardship in this, or handicap in his after life, for he has only spent six months more than the ordinary public school training period, and during these six months has gained experience and understanding which will be of the greatest benefit to him in any business or professional career.

With regard to the training ship in which he sees this probationary service, I would propose that, since we are bound under the Washington Agreement to scrap or to render unusable our large battleships and battle-cruisers, we take the largest war vessel available with an historic association in the Great War—say one which fought in the Battle of Jutland—and adapt her to suit the purpose of a Cadets' Training Ship. We would take out the heavy guns, magazines, torpedo tubes, etc.; for these have to come out anyhow, and in themselves are far too advanced to be of any instructional value to probationary cadets. As much room as possible should be made to carry at least 200 cadets, to provide class rooms, and allow of adequate space to display instructional models and gear. Also to provide a well-equipped gymnasium. The boys would sleep in hammocks and mess at tables after the manner of the lower deck. They should be made responsible for all the work and duties connected with the Quarter Deck or after-part of the ship, even the washing down, painting and polishing, in much the same manner as the Midshipman in the days of the old Training Squadron looked after the mizzen mast—and we in the "Hesperus" did all manner of work below and aloft. Treated in this drastic manner the ship as a training ship would preserve the truest naval associations, and materially assist the cadets in learning "the ropes" of a man-of-war. In the R.N.V.R. we have drill batteries and old hulks as drill ships, and I have served in both kinds under twelve Admirals of Reserves. Each and every one of these Admirals has expressed the opinion strongly that however much of a museum an old naval vessel may be, she is infinitely better for training men or boys in than any building, and this is specially so in the case of those who have never been to sea before. One has only to get on board a naval hull afloat to find at once the atmosphere of the Service. This is a thing one can never acquire within four brick walls, no matter how well-designed and costly they may be.

In other words, the proposed warship training vessel would be developing on more complete lines the idea of the "Thunderer" and those

cadet training ships maintained by foreign navies such as the United States, Japan, Denmark, Sweden and Italy. In such a ship the six months' training cruise of the cadets could include a maximum of sea time and close observation. At a reasonable expenditure of fuel the ship would visit foreign ports and whenever possible meet the fleet. By general naval service and work she would provide an incentive to the boys to become efficient and remain in the Navy.

At the end of this cruise, I venture to maintain that the public school cadet, especially the boy who has had the advantage of the Naval O.T.C. at Nelson College, would be trained as well as he possibly could be in the period. Also he would be quite capable of undertaking the duties, and undergoing the further training, of a Midshipman. At present the older battleships of the "Iron Duke" class are employed as seagoing training ships to give an adequate training to the short-service seamen on whom the Navy has to rely now so largely. Further appointment to such a training squadron would be ideal for the confirmed Midshipman of the new school to complete his training.

To sum up concisely the idea that I have in view. In these days when we hope for many years of peace and when the greatest economy in the public services is so urgently needed to obtain a reduction in taxation and a revival of the prosperity of the country, I feel that the time has come when we might make far more use of the great and unique British public school system than we do in entering our boys into the naval Service, and we might at the same time economise by transferring Dartmouth to a public school governing body.

No other country in the world has such a magnificent and pure public school life as Great Britain. It is the model which all foreign nations try to copy. Then why not make full use of it? Over eight hundred cadets have now entered the Navy by way of the Special Entry system, which has given ample proof of its efficiency and success. There is no insurmountable difficulty in the way, it is simply a matter of overcoming old-time prejudices and of devoting some organizing ability to the task of making the new form of training meet all the requirements of the Naval Service.

DISCUSSION.

"BRITANNIA," DARTMOUTH AND PUBLIC SCHOOL ENTRIES.

ADMIRAL SIR WILLIAM GOODENOUGH, in opening the discussion, said: It is encouraging on the whole to find that the guiding principle which governs the desire of all lecturers on this subject is pretty well the same, namely, that what we require in the continual progress of entry into and training in the Navy is a broadening of the mind. The lecturer has put before us an idea which I understand has been to a certain extent in the minds of those who are feeling about vaguely for something new.

To begin with, I would like to refer to two points on which I agree with him—they are the only two points on which I do. The first is that, however hard Leagues and Councils may try to bring about the beautiful idea of universal peace, it is on

the Navy in the end that this country will depend for its welfare and security. The second point to which I should like to call attention is the lamentable indifference which a very large number of the people of the country seem to show to their responsibility for supplying the Navy with the best of its youth.

The lecturer rather inferred in the early part of his lecture that the Navy has not moved with the times. He said that there is little difference between the root principles of the training given in the "Britannia" when it was first instituted—and for the sake of accuracy, I think it would be better to use the year 1863 for the comparison instead of 1859, because there were considerable differences made in those four years—and the present college at Dartmouth. A negative is a very easy way of refuting any statement, but if those who are really interested in this matter will go to Dartmouth and will then read or ask their fathers or grandfathers what the instruction in the "Britannia" was like in 1863, they will find that at Dartmouth there has been a far greater change in the general system adopted than has taken place in any public school in this country, with perhaps the exception that the Duke mentioned of the new public school at Stowe.

Do not think for a moment that I am one of those who imagine that Dartmouth is without fault and cannot be improved. I think the Duke said, truly, that by the system of training at Dartmouth for four years we do get boys cast in a wonderfully good mould, but still a mould, but I can assure you that everything is done to improve term by term and year by year the attempts that are made to allow of individuality being displayed. Even if the mould is somewhat similar, once at sea opportunity is given to boys to show their individuality.

The comparison between the Navy and fishing fleets does not seem to me applicable. With regard to the well-worn illustration about Nelson not being able, to pass a medical board, we may recall that at the age of fourteen he was sailing a boat in all sorts of weather up and down the Medway, which I happen to know is not a very warm place, and at the age of seventeen he was chasing a polar bear across the ice with a musket, so that there was not much the matter with him from a medical point of view.

Now I turn to the actual proposals that the lecturer has made. His own researches into the public schools were apparently not very encouraging, and I largely agree with the opinion of the headmasters that the foundation of a Naval Officers' Training Corps on shore for a Service which is entirely afloat would not be a very practical business. What is the lecturer's remedy? It is, so far as I could follow it, to have a naval public school, which would, I imagine, supply the larger part of the officers to the Navy, and he would turn over to that public school a portion of what is now at Dartmouth, with this very great difference, that the tradition instead of being inherent and natural becomes manufactured and almost unreal. The lecturer does not even put forward any guarantee that those who went to this naval college would go into the Service. Nothing is said, moreover, of that great professional training which must be given in a scientific Service. Where is it to be given? How long is it to take? It cannot be given at public schools in a sort of amateur training class; clearly we must have more concrete proposals before we are prepared to change a system which, at any rate, is consecrated by use and has been crowned so far with success, for one of a very vague nature.

The question is one of general principles; if we allow ourselves to be misled by using individual instances to make up our minds on general principles we shall be saying that all Lord Chancellors should go through the course of a midshipman, because there was one Lord Chancellor, Lord Erskine, who was a midshipman;

or that no officer should join the Army before he was twenty-four, because Lord Haig did not do so.

I have not so far said anything about the financial side. I wonder how many of you realise what the difference in cost is between keeping up an establishment on shore and keeping up a ship at sea. A ship is a far more expensive thing to keep up than a house. The £60,000, £80,000, or £90,000 which the lecturer thinks might be saved would soon be frittered away in all sorts of ways.

The reference the lecturer made to the United States is very interesting. As I read it, however, the scheme in the United States is for the supply of officers to what I may call subsidiary services; it is intended to provide a reserve which can be called on in times of war, and not for the supply of officers for the more regular Service.

The conclusion, therefore, at which I have arrived is that no reduction in taxation would be gained by adopting the lecturer's proposal, and that in a Service like the Navy we must have time and thought to develop it in the Navy. I certainly would like to see the time spent at Dartmouth reduced by one year in order that the boys may spend another year at sea, not undergoing courses of further training to become officers, but becoming as soon as they go to sea *actual* officers—not being shown responsibility, but *assuming* it. That is very different from the suggestion that boys should be 18½ before they even take the first plunge. What the lecturer speaks of as a prejudice is really a privilege. Those who really wish to make a study of the question should go to Dartmouth themselves, and they will then see that although it is not faultless the main channel of supply of officers to the Navy must be through the present system.

ADMIRAL SIR RICHARD PHILLIMORE: Having lately had under my orders both the college at Dartmouth and H.M.S. "Thunderer," also boys' training ships like the "Impregnable," and the establishment where short-service seamen are trained, I thought I might make a few remarks.

First of all, the lecturer has quoted the opinions held by some people about boys going to sea later, at 18½ years of age. The great headmasters and educational authorities, however, are very much like doctors; they do not agree. In a speech delivered last year at Southampton by the headmaster of Rugby, he said that he had educated hundreds of boys, and in many cases he found that after he was 14½ the boy could learn no more from his books. The same boy, however, woke up in a profession or in commerce or in something which really interested him. The type undoubtedly does exist, which has reached saturation point at 14½ and cannot absorb any more; so that perhaps "catch 'em young" has its advantages even in regard to that small percentage.

As I have seen both systems in operation, the four years at Dartmouth and the one year in the "Thunderer," I should like to mention a fact which strikes anyone immediately he sees the boys on board the "Thunderer" (incidentally, they are now in a ship called the "Erebus"). It is most noticeable how badly the ordinary school boy compares in physique with the boy who has come from Dartmouth. When the boys are together you can pick out the Dartmouth boys every time, they are so well set up. It is a weak point in our public schools' training that they do not give enough Swedish drill to the boys. After two or three months' training, however, you cannot tell the difference between the two sets of boys.

I think at the present moment the Service gains a great deal by the two methods running on side by side. The "Thunderer" method is very good for the boy who has not made up his own mind at 13½—the boy the Duke referred to—who finds out later on that he would like to go into the Service. He gets into the

Service by what you may call this by-pass. The Admiralty can keep their hand on the throttle and let in more special entry boys if there are deficiencies under the other system, so that in that respect it is useful. I take exception to the Dartmouth course being four years long, and think it would be much better if it was only three years. I do not think, however, we should get over that difficulty by the Duke's college. I have great respect for the cases the lecturer quoted in regard to Harvard, Yale and other places for sailorising on shore, but whether they go to sea early or late we must not forget the main point on which, I suppose, we all agree, and that is that a sailor can only learn his job at sea. I think the sooner he gets there the better, provided he has got enough education.

I also think that they are rather inclined to spoon feed them at Dartmouth by telling them what they are to read. If you read Lord St. Vincent's despatches, you will see that, although he managed to teach himself, he wrote beautiful despatches. We know that he learned his navigation from an old quartermaster in the cable tier who had once been mate in a merchant ship, but I do not think the time has come for scrapping Dartmouth.

A NELSON COLLEGE.

LIEUT.-COMMANDER GALPIN, R.N. : I am very much in agreement with the main points brought out by the Duke. One point in favour of the public school entry that has not been mentioned is that in the case of combined operations being undertaken, it would be quite possible for the officers in command of the naval, military and air forces to find that they had all been educated at the same school, which would be a great bond between them and would facilitate intercourse and work between the three Services.

I do not, however, agree with the proposal to do away with Dartmouth. I think so long as the country can afford to maintain the two schemes, competition and rivalry will be all to the good and will help both. If the early entry were abolished, all the interest which the many preparatory schools throughout the country have at present in the Royal Navy would be destroyed, and that would be a great pity. In such a nation as ours, the more people who can be induced to take an interest in the Navy the better. If for reasons of economy only one scheme can be entertained, then I think the public school entry gives equally good results, if not better, and as it is far more economical to the State, that method should be the one to be retained. If both are retained, however, I should like to see a closer approximation between the numbers entered by the two methods. If you take the Navy List at the present moment and refer to the ranks from Lieut.-Commander down to Midshipman, including Lieut.-Commanders (E) and Midshipmen (E), the number of public school officers appears to be almost exactly one-eighth of the total. That seems rather an unfair proportion, and, if it could be arranged that it was something nearer one-half, the two schemes could be tried out better. With regard to my suggestion of a new public school on account of the long waiting lists at the existing schools, I think that as we have a Wellington College it is a very extraordinary omission for a nation which depends so much on the sea not to have a Nelson College. I would like to see such a college established with special benefits in the way of reduced fees to sons of naval officers; the school should be situated by the sea, but not necessarily at Dartmouth, and it should have a Naval instead of a Military O.T.C. The main difficulty, of course, would be the large sum of money necessary to endow a foundation such as this, but I do think that, with all our sea interests, a strong Committee ought to be formed to investigate the question in detail.

ARGUMENTS AGAINST THE LECTURER'S PROPOSALS.

ADMIRAL SIR ERNEST GAUNT : I am against the lecturer and the last speaker so far as he supported the lecturer. I would like to take the headings in the précis and to run shortly through them. First of all, the lecturer says : " ' Britannia ' and Dartmouth very good in themselves, but the idea of catching boys young not essential to-day, and it has several disadvantages." I do not think it has any *naval* disadvantages. If you " catch 'em young " they are more early brought into positions of command, and in every way that is an advantage to the Service. " Boys suffering from mild defects in early years are medically rejected, but often completely recover, and so good officers are lost to the Navy." There is the other side of that. If you let in people with mild defects, very often those defects develop badly. " Boys do not know their minds at thirteen years old." I do not agree with that at all. Some of us did know our minds when we were thirteen years old. " Too many square pegs in round holes." I do not know when you are going to trim down your " square pegs." I think it is a good thing to start early. " Difficult to change to other professions." I think there His Grace is looking at the Navy from the wrong point of view. People who enter the Navy enter it with the intention of serving for the whole of their lives in the Service, and there is no question of changing into any other profession. If they have any idea of that kind they had better not enter the Navy at all. " By going into the Navy at thirteen years old, general education is often restricted, which proves a handicap in after life." That is the same thing. We are not looking at " after life " ; we are looking at the Navy as it is at the moment.

These boys should be trained in the best way possible and they should not think of anything but the Navy. " Success of special entry, and of temporary enrolments of young officers during the War." I do not think anyone who has had special entry officers serving under him will contend that they are not very good indeed. I have had special entry officers whom I found every bit as good as the officers who entered from the " Britannia " and from Dartmouth, but you cannot argue from special cases, and I think it is a very good thing that the two systems should run along side by side. Other speakers have discussed the suggestion that the Duke has made for buying up the college of Dartmouth. I can only say that I am " dead agin it."

IN SUPPORT OF LATER ENTRY.

VICE-ADMIRAL SIR HERBERT RICHMOND : I entirely support the view of entering boys late. I think you would get better officers.

I do not think either of the two reasons which are given by the Duke for " catching 'em young " are of any degree of importance. It is frequently said in support of the idea of " catching 'em young " that a very large number of our distinguished officers in the past joined when they were very young. That I know is the case, but a great many very distinguished officers have also entered at an older age, and some of them came from the Public Schools. Omitting the exceptional cases of the Commonwealth Admirals, you have Vernon, who was at Westminster and afterwards at Cambridge under Sir Isaac Newton ; he did not go to sea until after he was seventeen ; Lord Cochrane went to sea at 17½, Lord Hood at 16 ; Sir Charles Collyer, after being at Westminster and Lincoln's Inn, did not go to sea until he was nineteen ; Borlase Warren was at Winchester and Emmanuel College and went to sea between the age of eighteen and nineteen ; Hawke's old patron, Francis Geary, went to sea between seventeen and eighteen. In our own time, Sir George Tryon, was at Eton until he was over sixteen and did not pass for

midshipman until after he was eighteen. I do not say that I have covered the whole of the ground from the point of view of proving that point, but I have shown that there have been very distinguished officers in old times who went to sea at a later age.

So far as moulding people young is concerned, I do not quite know where the advantage of moulding them young comes in. You put people into a matrix and squeeze them out in the same shape, and I do not think you necessarily get a good product on the whole. If you want a case of taking them young and moulding them into shape as officers, I cannot give you a better example than the old Austrian Army, in the military schools of which boys were taken at the age of eight and moulded into a shape when they were young, and they were known as the worst officers in Europe. I venture to say that uniformity of type is not an advantage but a disadvantage. I think Lord Cromer said that the strength of the Roman Empire lay in its diversity and type, and Sir Charles Lucas in referring to the Australian says that this different type makes for increased vitality of the Empire. The same is true of the sea.

Some speakers have compared the two sets of boys, and while arguing against the older age of entry have said that they have found the boys who enter at an older age extremely good and indistinguishable after a few months from the younger boys. If, as these speakers have said, the same results are obtained by entering them older, wherein lies the advantage of taking them young at a greater cost?

There is another advantage to be borne in mind in favour of older entry which came before our notice in a very emphatic way during the war, namely, that you could expand very much more quickly by taking older boys; in fact, you cannot expand at all under the Dartmouth scheme, so that in war it is necessary to adopt the other scheme. Where, therefore, is the advantage of taking them young?

I think the United States scheme which the lecturer referred to is one of very great interest, and I should like to see it examined very closely. The O.T.C. scheme was condemned by one speaker, who said it was no use having an O.T.C. on shore. If it is so useless to have an O.T.C. on shore, what is the use of having a naval college in a shore school? It is of even less use. Anyone who has read the reports of a great many committees which have studied the question of Naval education—a Departmental Committee in 1849, Shadwell's in 1870, Rice's Committee in 1875, Ward's in 1885—will appreciate that they all had one fundamental fault to find with the education in their time, and that was that the education of the boy was not completed before he went to sea. You find Admirals and everybody else putting forward that point of view. Admiral Sir Thomas Cochrane who himself went to sea young—he was a Commander between the ages of sixteen and eighteen and Post-Captain five months later—in giving evidence before a Parliamentary Committee in 1861, emphasized that point most strongly. He said that the great drawback of taking boys young, and taking them to sea young, was that their general education was not completed, and it was necessary to continue to give them education at sea and the sea was not a fit place for giving scholastic education. Scholastic education can be furnished in a public school; why, then, not give it there and get their education finished, and then let them go to sea, as Sir Thomas Cochrane said, to get their practical experience in the only place where it can be got—at sea? But there must be no regulations or orders which prevent their pursuing their practical work as officers for which alone they come to sea: their whole time while they are at sea must be devoted to that practical work and not diverted to scholastic education. Many others of the distinguished Naval officers who gave evidence before these various Committees condemned a

system of education which necessitates the continuance of Naval Instructors in sea-going ships and that form of education at sea: yet that system we still perpetuate in spite of the strongest evidence.

I do not agree with the proposal made as to the "Thunderer." It is not in big ships that boys learn seamanship, but in small ones. Therefore, if the lecturer's scheme of entering boys at an older age came in, I should like to see them get their preliminary nautical training in small ships.

A COMPARISON AT NINETEEN.

REAR-ADMIRAL W. W. FISHER: My remarks will be very short and general, because I feel that though all the points raised by the Commodore can be replied to, that would take a long time. Having had five brothers at public schools, three older and two younger, and having been brought up with them and their friends, I will say that I yield to no one in my respect for the public school. I have often wished, and I think many others have also, that some practical scheme could be devised whereby the Navy could have the best from the English public schools. I think all admit that we want the best, and that nothing else but the best would really suit our purpose. The practical difficulties are, however, great.

I am just going to make a comparison, if I may, between the young man of nineteen as he would be under the lecturer's scheme, and the officer of nineteen as we know him to-day. Under the lecturer's education scheme he would have done his full time at a public school and six months' naval training. He would have had his general education, admittedly valuable. He would have obtained a smattering of naval knowledge, next to no technical knowledge, little or no habit of command, and little or no naval tradition. Further, we cannot blind ourselves to the fact that only a very small proportion would be boys from the Sixth Form and many would come from public schools not of the first rank as we generally understand them.

Under the present system, our subordinate officers of nineteen have been given an education that is at least equivalent to that of the very best modern side of any public school. They have imbibed that education in a naval atmosphere; they have watched the best type of Naval Officer as opposed to the schoolmaster, at close quarters; they have been at sea for eighteen months; they have exercised command of men in a variety of circumstances; they have actually been an integral part in a ship's fighting organization, not as pupils but as essentials. If these are not sufficiently weighty considerations, I would venture to suggest that in no public school can you expect to find that continuous insistence on alacrity, cheerfulness and obedience, because, whilst these qualities are of the essence in the Royal Navy, they are not so in the many other careers that a public school caters for.

Concerning economy, I can hardly trust myself to speak. The Navy is economising to breaking point, but I believe it to be the general opinion, both ashore and afloat, that economy in education is the very last resort of an enlightened State; and that as regards Naval Officers, to whom are entrusted very great responsibilities, both in peace and war, any expense that makes them more able to discharge these duties is abundantly justified. The United States, Japan, Italy and France all have special Naval Colleges, for they realise, as we do, that life is too short for everything, and that the training of officers who are to win battles at sea, with all the technical and moral qualities that that implies, is incompatible with four years' "general" education at the most receptive age. It demands unremitting attention with a definite purpose in view, from the earliest possible moment.

SEA SENSE AND TRADITION.

CAPTAIN BLAKE, R.N.: The particular point to which I wish to call attention was, I thought, passed over rather lightly by the lecturer, namely, "catch 'em

young." It was dealt with very incisively by Admiral Richmond, but I cannot say that I agree with him. Admiral Richmond quoted instances of many distinguished Admirals who had gone to sea late in life, but I think myself that probably they would have made a success of it at whatever age they went to sea.

There are two things in what you may call the "make-up" of the Naval officer, which I consider are essential, and on which I think a great many naval officers would agree with me, one is "sea sense" and the other is "tradition." How are we to instil these? The only time at which I suggest we can instil them is during the impressionable years between the ages of fourteen and eighteen and that is what we are endeavouring to do at Dartmouth. So far as sea sense is concerned, we rub their noses, as far as possible, in salt water—and that is a thing you cannot do at a public school. As regards tradition, we give them there a great deal of naval history. We have, as Admiral Fisher remarked, the best selected officers from the Service to give them those traditions which have been handed down to us by the great seamen of the past, and to give to these young fellows by their own personal example an idea of what a Naval Officer should be.

These young men have an object in view, and I think it is a great thing that they should be imbued, as we hope they will be, with the traditions of the Service, and in this way it is possible to produce something which the system of late entry cannot produce.

GENERAL EDUCATION AT DARTMOUTH.

LIEUT.-COMMANDER STARTIN, R.N.: I was educated at Dartmouth College, and I have had the good fortune of going back to the College on the Staff after the war.

After listening to the lecturer, and going through his précis, I humbly submit that he does not know very much about Dartmouth. Up to the age of seventeen you get a wonderful education there. That is borne out by the fact that many parents send their boys to Dartmouth so that they can get a good general education first, and these boys get so keen about the Navy that they decide to stick to the Service. As far as the question is concerned of boys not knowing their own minds at thirteen, my experience there was that the boys at the end of their four years' schooling were chafing to get to sea. With regard to a Naval O.T.C. at public schools, you can get only retired Naval Officers to take on that sort of thing, but at Dartmouth the training is carried out by selected officers on the Active List.

Finally, there is the question of the numbers from the public schools being inadequate. This was admitted by the lecturer. As the public schools only give us thirty a year on the executive side as compared with 150 a year from Dartmouth, it would be necessary to "hot up" the public schools to supply the necessary numbers. This is an artificial system, and, surely, a national system is better. We are a great maritime nation, and all British boys, at one stage or another between ten and fifteen years of age, are caught by the glamour of going into the Navy. This is a national asset and one that I suggest it would be dangerous to ignore.

THE ENGINEERING SIDE OF THE NAVY.

ENGINEER CAPTAIN ONYON, R.N.: The lecturer has not referred to the engineering side of the Royal Navy. As you know, the Dartmouth system was embarked upon in 1902, and it was then hoped by Lord Fisher, and those who were responsible for the system, that at least a certain proportion of the Engineer Officers required for the Navy would come from Dartmouth College. As far as that is concerned at the present day it is a complete failure, because last year we only got three boys for the engineering side from Dartmouth. In the last two years we have got only

sixteen. Last month a batch of thirty-four boys went to the Engineering College at Keyham, 30 of them came from the public schools and only four from Dartmouth. I think, therefore, we must admit that there is something wrong so far as Dartmouth is concerned from the engineering point of view. I think if the Admiralty would only impress upon the officers of the Naval College at Dartmouth the necessity of taking an interest in boys who show a liking for engineering, we should certainly have a larger proportion of them volunteering.

With regard to what the lecturer said about catching boys when they are young, my opinion is that the younger the boys enter the better. I joined the Navy from a public school when I was about fifteen years of age. The public school I came from used to have a Navy class and used to pass quite a lot of boys into the Paymaster line. Now we have got the new brand of officer. He is far better trained than ever before; he knows far more at the age of seventeen than we knew at the age of twenty-one. Personally, I think it would be a thousand pities to alter the present scheme. It only wants a little modification; it only wants a little pressure to be put on the officers in charge of the College to try and persuade those boys who have a leaning towards engineering to take up the engineering side of the Navy. What shall we do in future without engineers? The scheme at present is dead. It produced only sixteen boys out of ninety-six. Lord Fisher, who was a very astute man, knew that he would not get as many as he wanted, but I doubt very much whether, if he were alive to-day, he would not have been extremely surprised to find that last year he got only three out of the scheme.

The interview examination is all right. The only question about the interview is that the Admirals who conduct the interviews have varying ideas. One Admiral considers that he has to pass into the Navy the son of every Naval Officer; others say they will only pass into the Navy the best boys they can find; so that while sometimes we get the wrong type of boy at others we leave out boys who would make splendid Naval Officers. They have a chance of coming forward later, as the Duke suggested, from the public schools.

As regards the spirit of the boys after serving four years at the College, I would like to give you an instance in regard to a batch of eighty boys, the last big war batch, whose parents were offered £300 each to remove them from Dartmouth College. There was not a single boy who asked to leave. One parent wrote to the Captain and asked to withdraw his boy, but when the boy heard of it, he went to the Captain of the College, and said: "Please, sir, I do not want to leave the College at all." The result was that the Captain wrote to his father and the boy remained in the Service. If these boys did not know their minds at thirteen they certainly knew them at seventeen, and everyone of those boys wanted to go into the Navy.

One was rather afraid of cramming in the old days. I submit you are in danger, in starting a Navy class, of cramming boys to pass the examination for the Navy, and that is a thing we want to avoid.

As a member of a number of engineering institutions, I claim that I express the views of the leading engineers in this country when I say that something must be done to improve the conditions in order that we may get a larger proportion of boys at Dartmouth to go into the engineering branch of the Navy, because the Navy wants those officers. A finer body of officers than passes into the engineering branch of the Navy does not exist. There are no better engineers afloat anywhere. Therefore it would be a national disaster if we have to stop that system of entry.

ENGINEER-CAPTAIN J. LANGMAID, R.N.: I was appointed to H.M.S. "Britannia" in 1883 to arrange and carry out a course of instruction in elementary

engineering, and spent about seven years doing this duty. I also did duty for some time at the Engineering College at Keyham, which was opened in 1880.

While I agree with the lecturer that the age of thirteen is too early for boys to join the Navy, I consider that 18½, as he suggests, is far too old, and that some intermediate age might be chosen, possibly fifteen. I do not agree, however, with the idea of boys not knowing their minds at thirteen, for instance. I have two sons now holding the rank of Lieutenant R.N., and I know that both of them had decided on a Naval career at thirteen, and this probably holds good in many other cases.

As the last speaker has said, there is no mention made in the lecture on the subject of engineering. We must recognise the fact that a fighting ship is a steam being, and that the engineer has a large share in her design, construction, care and maintenance; while the whole question of her ability to reach the enemy lies in his hands. This was recognised by the late Lord Fisher, when he took such a great part in arranging the Selborne-Fisher scheme. Of course, it needed some modification when brought into use; but by 1919, after the experiences of the war, it had got into good working shape.

The Dartmouth-Keyham system has produced good engineer officers, but I do not think the proposed scheme could possibly do so. The public schools, for instance, could hardly be expected to provide professors and teachers of engineering, with workshops, and lecture rooms: so that the proposed officers would not start their instruction in this subject until 18½; which, I think, would be very late to begin. We must remember also, that the present Naval Officer obtains his first commission at between nineteen and twenty, so that there would be a long gap between the ages of the two sets of officers. Finally, I think that the present system has served us very well, and that we should hold on to it.

DARTMOUTH TRAINING BEST.

CAPTAIN SIR DAVID WILSON BARKER, R.N.R.: I think I may claim to speak on this subject with some authority, because of my practical knowledge of most of the sea training systems of the world as well as of our own, my long sea experience and many years in command of a training ship.

I am convinced that the present system at Dartmouth College is satisfactory from the naval point of view. The cadets go to sea in destroyers, and so get excellent practical training, in addition to their instruction at the College.

The Duke, in his very interesting paper, suggests that Dartmouth should become a public school. I am afraid that on this point I entirely disagree with him. I should be very sorry to see Dartmouth transferred from Admiralty control to any other. I am quite in agreement with the view Admiral Fisher has expressed that the atmosphere of a naval school must be naval and the training primarily directed to fitting future Naval Officers for the leadership and command of men. The best argument for this view is the extraordinary spirit of discipline, co-operation and good fellowship existing among officers and men of a ship's company. Nothing in the least approaching this spirit can be found in commercial life or in any other undertakings among men on shore.

Again, boys trained young aboard ship grow accustomed early to living with their fellows at close quarters, so that the lack of privacy later on in ship life is no hardship to them, but it does engender a spirit of consideration for others; a give-and-take attitude is practically universal among seamen and to an extent that outsiders can scarcely understand. Last month, I spent eight days on a trawler in the North Sea, and from her I went straight to one of our finest war ships commanded by one of my old cadets. The contrast from a three-ton boat to a vessel

of 40,000 tons was great, but the spirit of comradeship on both ships was just the same.

I quite agree with the system by which the Admiralty take some boys from public schools and mercantile training ships; that is an excellent scheme, but to reverse the procedure by turning the chief training college into a public school would be quite another matter. I am convinced that the Dartmouth training in school, in boats and on ships at sea is on the right lines and the best that can be devised.

THE LECTURER'S REPLY.

COMMODORE HIS GRACE THE DUKE OF MONTROSE, in reply, said: I think we may take it that most of the opinions expressed to-day are adverse to my case; but in reading this paper I may tell you that I fully anticipated that. This question, however, is one which creates very wide interest in the country as distinct from naval circles, and because I knew there would be opposition here, I did not see any reason why I should not bring forward the matter for discussion. I think, however, the criticisms I have listened to this afternoon are really very mild. If anybody had raised this question twenty-five years ago, and said that you could make Naval Officers by sending boys to a college on shore, you would have had all the Admirals of the day up against you.

Good officers have been made, however, even though they did go to a college on shore; and likewise the day will come, when the public schoolboys who are now in the Service—there are over 800 of them—will reach Flag rank; then it will be found, if this same question is debated, that there will be more equal division of opinion upon it than there has been here to-day. I must protest against the accusations that my lecture showed a lamentable disregard for old traditions. There is nobody more of an old Tory than I am. My critics go back to Dartmouth and the "Britannia," but I go back to the time before Dartmouth and before the days of the "Britannia," to the days when novices went to sea straight from the shore. I was asked who would go to Nelson College. My answer is, the college would become known as having a distinct naval bias, and parents who wished their sons to go into the Navy would naturally try and send their boys to that particular college, in the same way that parents who wish their sons to go into agriculture send them to an agricultural college.

Admiral Phillimore said that the physique of the public schoolboy compared very badly with the physique of the Dartmouth boy, but that is not a fair comparison. All the Dartmouth boys have been through a medical examination, and the public schoolboys have not.¹ If you want to make a comparison you must compare like with like; and if you compare the physique of the special entry cadets with the physique of the Dartmouth cadets of the same age I think you will find there is no difference.

Lieut.-Commander Galpin suggested that we should maintain Dartmouth and also create a new public school, but that suggestion defeats my idea of economy. One of the principal objects of the lecture was to transfer what is now costing the country £90,000 a year to a public school foundation, and to that extent relieve the Government of the cost. We all admit that Dartmouth is a most excellent institution, but it costs money. You can have anything in this world if you like to pay the money for it. Therefore it is a question whether in these days of urgent

¹ Admiral Phillimore's comparison of physique referred to Dartmouth and Special Entry (i.e. public school) Naval Cadets, all of whom have been through a medical examination. The physical requirements for Special Entry candidates are laid down in the Appendix to the Navy List—October, 1926, page 133.—ED.

economy we as taxpayers are to continue paying £90,000 a year over and above the parents' contributions for this college. I think it is a mistake to believe that there is only one system of making a Naval Officer, and that through Dartmouth. I think there are other alternative systems and more economical ones which should be considered. I disagree with the idea that eighteen years of age is too old to go to sea. If you are a born seaman you will be a seaman at whatever age you go to sea. I think you will be just as good a seaman if you go afloat at the age of eighteen, fully educated as if you go to a brick and mortar college at thirteen only half educated. There is nothing in the Navy to-day which you cannot learn at the age of eighteen.

I think it is unnecessary for me to deal with any further points, particularly as the time is getting so late, and it therefore only remains for me to thank you very much indeed for the patient hearing you have given my paper. (Cheers).

THE CHAIRMAN.

In proposing a vote of thanks to the lecturer, the Chairman said: There are one or two points which, if it was not so late, I would have liked to raise myself, and perhaps I may be allowed to say one or two words, because the Duke's proposition in its full extent would be a tremendous change in our system if we were to adopt it. I would like to ask two questions. First of all: has Dartmouth been a failure? I hardly think anybody even here in this room would say "Yes" to that. The second question is: has the Special Entry system had sufficient time to prove itself a complete success? To all appearances, it has been, I think from all I hear, a success, but you have to remember that it has only been tried up to a certain point, and that those who came in under the special entry have not yet attained to the higher ranks in the Service or been tried in the higher commands. Very likely they will justify themselves—they probably will, but, at any rate, we do not know that yet.

There is another thing about the Special Entry which makes it rather difficult to dogmatise too much, and that is that the larger part of those who joined under the Special Entry system did so under the stimulus of the war, and it is quite possible that you may get in the future rather a different type joining by special entry in times of peace from what you got then.

Some people have rather suggested that there is a great deal of specialising at Dartmouth. I do not know whether any of those who have said that have ever been there, but I should say that the ordinary critic who went to see the system at Dartmouth at the present moment would be much more inclined to say that there was too little specialisation. In the old days no doubt it was a fair criticism to say there was too much specialisation and then we rather swung to the other extreme. I hope, however, nobody will go away with the idea that the whole of the time, or any very large proportion of the time, of the boys at Dartmouth is given up entirely to naval instruction at the expense of general instruction. It is not so. I should say that the boy who goes to Dartmouth and who for some reason or other is unable to go into the Navy afterwards, is quite capable of holding his own with any other schoolboy of his own age in any walk of life.

I quite agree with both the Engineer-Captains in saying it would be a very good thing if we could encourage more boys at Dartmouth to go into the engineering side, and I hope as time goes on that will be more possible. I think Lieut.-Commander Galpin said it would be a good thing to increase the number of the Special Entry. I would like to remind those who think with him that if you do that you have to reduce Dartmouth, because you can only have a certain total number. If you reduce Dartmouth then your economy object fails, because it would be much more

expensive to keep Dartmouth up with a smaller complement of boys than it is now. Therefore, it certainly would not be an economy to add to the number of the Special Entry and to diminish the number at Dartmouth at the same time. I think the question is one which will have to be very carefully watched.

I would not go so far as to suggest or to agree to the suggestion that it is time now or even that it would be wise to have a committee to enquire into these things. We live too much in the days of committees, especially committees which are called committees of impartial people. Impartial people can only be found amongst those who are totally ignorant of the subject upon which they have to advise.

I am quite sure nobody here will expect me or the Admiralty to embark on a hasty policy with regard to Dartmouth. The sacrifice of the great tradition which Dartmouth carries with it is a step which no one in my position would very lightly take. May I, your Grace, express once more our gratitude to you for having initiated this discussion. It has been most interesting. I think we really ought to have had two days for it, but, no doubt, many of us will go on wrangling about it for several months to come.

The resolution of thanks was carried by acclamation.

VICE-ADMIRAL SIR H. H. BRUCE (Vice-Chairman of the Council), in proposing a hearty vote of thanks to the First Lord, said: I am sure you will desire, at the same time to thank him for the very valuable remarks he has made. I should also like to say, on behalf of the Council, that we asked thirty headmasters of the various public schools of the United Kingdom to come here to-day, and I regret to say that none of them have been able to attend.

The resolution of thanks was carried by acclamation, and the meeting terminated.

COST OF TRAINING NAVAL CADETS

In view of the frequent allusions to the cost of training Naval Cadets in the foregoing lecture and discussion, the following authoritative figures will be of interest:—

If the only method of entry into the Royal Navy were to be by what is known as the Special Entry, and assuming the training to consist, as at present, of one year in a training ship, the numbers required would be (approximately) 200 per annum.

The following figures show the cost of the various methods that have been in force in recent years.

- (1) Annual cost of maintenance of Dartmouth College (1926), approximately:

£158,459 Gross.

68,459 Re-payable by parents.

£90,000 Net.

- (2) Annual cost of maintenance of H.M.S. "Thunderer" (1923), as Sea-going Cadets' Training Ship, was approximately £244,431.
- (3) If "Thunderer" had not been used as training ship, but had been maintained in Reserve Fleet, annual cost of maintenance would have been approximately £133,563.
- (4) The annual cost of "Thunderer" as a Reserve Fleet ship, training 200 Cadets would be, approximately £181,163.

NELSON'S TUTOR

By PERCY CROSS STANDING.

"I KNOW of no family," wrote Sir Edward Cust in his "Annals of the Wars," "to compare with the Hoods in gallant deeds but that of the Dukes of Brunswick, sixteen of whom fell on the field of glory." The Hood family did, indeed, acquire no fewer than five patents of the nobility while serving their country in the Royal Navy—"the descendants in two generations from one common grandfather." The "common grandfather" was Squire Alexander Hood of Mosterton, Dorset, father of Samuel Hood, D.D., Vicar of Butleigh and Rector of Thorncombe, who in his turn became the parent of the future Admirals Viscount Hood and Viscount Bridport.

There is a pretty story of the happy accident which procured for those two boys—who, by the way, were born on 12th December, 1724, and 2nd December, 1726, respectively—an introduction to the sea service of King George II. A Captain Thomas Smith, R.N. (afterwards Admiral, and popularly known as "Tom of Ten Thousand"), was travelling to Plymouth when his coach broke down in Butleigh Village, and he became the temporary guest of the worthy vicar. On taking his leave, the bluff sailor said: "Dr. Hood, would either of your boys care to go to sea with me?" This offer was at once accepted by Alexander, but declined by Samuel, who, however, shortly afterwards also elected to join Captain Smith. He it was who was destined to become the tutor and intimate friend of Nelson and of William IV.

We know that Samuel Hood first entered as a midshipman in the "Romney" under Smith, having joined the Royal Navy on 6th May, 1741. The war of the Austrian Succession had just broken out. We find him next in the "Ludlow Castle," under the celebrated George Brydges Rodney. Then in 1745-6 again under Smith, now Commander-in-Chief on the Scottish coast in connection with the rising led by Prince Charles Edward Stuart. Promoted lieutenant of the "Winchelsea" (Captain Dyve), young Hood received both his baptism of fire and his first wound. This was in single combat with the French "Subtile," which was added to our Navy as the "Amazon," and Hood sustained a slight wound in the hand. The peace of Aix-la-Chapelle left him unemployed for several years, but in 1755-6 we find him serving under Admiral Keppel in North America, and, as Captain of the "Grafton," under Commodore (Admiral) Holmes in the latter's engagement off

Louisbourg. Idleness was ever abhorrent to Hood's character, and, writing to Lord Temple, he uses the expression: "Being in no ways inclined to be idle ashore while anything can be got to employ me," etc. Accordingly he "got" the 50-gun ship "Antelope," and, encountering the heavily-armed "Aquilon" off the French coast on 13th May, 1757, drove her, a total wreck, on the rocks of Audierne Bay, at a cost to himself of only three killed and thirteen wounded.

He next served under Hawke in dismantling the fortifications of the *île d'Aix*, and, having captured, while in the "Vestal," the French "Béllona," after a desperate duel (the prize was added to the Royal Navy as the "Repulse"), he was posted to the Mediterranean at his own request. "For ten years," he wrote, "I have been afflicted with a bilious disorder, which has been so very severe within these nine months as to confine me to my cabin for many days together."

George III was now on the throne, and he testified in the most flattering ways his opinion of Hood's capacity. Several years after the Treaty of Paris, the latter was made Governor of the Naval Academy and Commissioner of the Navy at Portsmouth, and the King, visiting that station in 1778, conferred a baronetcy upon him. Not only this, but, a sea-career having been decided upon for Prince William (afterwards William IV), the monarch expressly desired that his son should receive his preliminary training under Hood. In an autograph letter to Sir Samuel, the King said: "The young midshipman will be at the dockyard between one and two on Monday, and I desire that he may be received without the smallest marks of parade." As a matter of record, Sir Samuel Hood and his brother, Alexander, were promoted Rear-Admirals of the Blue and of the White respectively on the same date, 26th September, 1780.

Before coming to the intimate friendship between Hood and Nelson, which commenced in 1782, it is necessary to touch upon the former's share in the Atlantic campaign of Rodney's fleet, culminating in the great victory of "the Saints." He was sent, his flag in the "Barfleur," to reinforce Rodney in the West Indies, and temporarily held command in 1781, while that officer went home for a while. During that time Hood utterly out-manœuvred De Grasse, and, in a partial action after Rodney rejoined, literally covered himself with glory. With fifteen ships to Hood's eight, the French Admiral's second in command (De Vaudreuil) endeavoured to cut him off from the main body. "Had De Vaudreuil made use of his superiority on the spot," says Mr. Edward Fraser, "and attacked Hood vigorously at close quarters, there could have been no question of repairs! Hood's squadron would have ceased to exist as a fighting force; twenty-five per cent. of Rodney's total strength would have been shorn away at one stroke . . . The 'Barfleur' had at one time seven, and generally three, ships upon her. Hood

remained very little the worse for his hammering, and after three quarters of an hour's firing, De Vaudreuil gave over."

As every student of that campaign is aware, it was Hood, in the "Barfleur," who captured De Grasse in the "Ville de Paris" in the subsequent victory of 12th April, 1782. De Grasse, his flagship a wreck, finally fired a challenging gun, and, wrote Hood: "I concluded that the Comte de Grasse had a mind to be my prisoner as an old acquaintance, and therefore met his wishes by looking towards him." Sir Samuel also rather bitterly regretted that a pursuit of the remaining Frenchmen was not made, and said so to Rodney, who replied: "Come, come, we have done very handsomely." (Lord Rodney was by that time, of course, a very old man.) A week later, after several days occupied in repairing damages, the Commander-in-Chief *did* detach Sir Samuel to "pick up stragglers." He discovered five enemy vessels endeavouring to escape through the Mona Passage, and of these he promptly cut off and captured the "Jason" and "Caton," a frigate and a sloop. With pardonable chagrin, noting what might have been achieved by a pursuit in full force, Hood reports to his chief: "It is a very mortifying circumstance to relate to you, Sir, that the French fleet which you put to flight on the 12th (twenty-six in number, including frigates) went through the Mona Channel on the 18th, the day before I was in it."

Sir Samuel Hood was now elevated to the Irish peerage as Baron Hood of Catherington, receiving in addition another autograph letter from the King, and the Freedom of London in a gold casket.

But he had not quite done with the West Indies. After a few months' leave, he sailed thither again, his flag still in the "Barfleur," and Prince William—who from henceforth became his lifelong friend—on board. Nelson was at that time (October, 1782) only twenty-four, but already in command of the 28-gun frigate "Albemarle." Meeting the young captain, and at once forming a warm regard and admiration for him, Lord Hood arranged for the "Albemarle" to join his squadron. Nelson, he said, he regarded already as "the most original tactician of the day," while Nelson on his part, came to look upon him as instructor and affectionate friend. Presently, indeed, he transferred Prince William to the "Albemarle," to be with "that young captain, who had never been in a fleet action, for instruction in tactics."

Peace again declared, Hood and Nelson contrived to see a good deal of each other on shore in the next decade, during five years of which the young man was on half pay. Meanwhile, Hood was made Commander-in-Chief at Portsmouth, elected M.P. for Westminster (where he defeated Charles James Fox), joined the Board of Admiralty under Lord Chatham, and was promoted Vice-Admiral.

Early in 1793 it was realised that war with revolutionary France was inevitable, and Hood, his flag now in the "Victory," was appointed

to the Mediterranean. Nelson was given the "Agamemnon" (64) —"the turning-point of his career"—and to his supreme joy was allotted to Hood's command. They arrived before Toulon in July, and the port was in our hands by 28th August. Nelson's letters of that period were an absolute eulogy of his beloved chief, as thus: "No fleet, I am certain, ever served their country with greater zeal than ours has done, from the Admiral to the lowest sailor. What an event this has been for Lord Hood; such an one as history cannot produce its equal; that the strongest place in Europe, and twenty sail-of-the-line, etc., should be given up without firing a shot. It is not to be credited . . . Lord Hood is so good an officer that everyone must respect him. All the foreigners of Toulon absolutely worship him; were any accident to happen to him, I am sure no person in the fleet could supply his place."

Now, however, followed the evacuation of the port, rendered inevitable by the onslaught of some 50,000 Republican troops (including the young Napoleon Bonaparte) upon 11,000 of the allies. In two Christmas letters, addressed to his father and to the Duke of Clarence, Nelson went on to say: "Lord Hood attempted to rally the flying troops, but the current was too strong. He showed himself the same collected, good officer which he always was; he was the admiration of everyone, and exposed himself to great danger . . . Lord Hood was obliged to order the French fleet, twenty sail-of-the-line, twenty other men-of-war, together with the arsenal, powder-magazines, etc., to be set on fire. The mob had risen, was plundering and committing every excess. The quitting of Toulon by us, I am satisfied, is a national benefit, both in money and in saving some of our gallant English blood, which, when the muster comes to be taken, will appear to have flowed plentifully." Port and town were absolute pandemonium, and it was thanks to Hood's initiative and humanity that the lives of 15,000 men, women and children were saved by being taken on board his own and the captured ships.

He next turned his attention to Corsica, where the celebrated Paoli was opposing the French, who still held possession of San Fiorenzo, Bastia and Calvi. Nelson reduced the first-named place on 17th February, 1794, and then Hood proposed to the officer commanding the troops a combined attack on Bastia. Such co-operation was refused on the ground that the place was too strong for an assault to be successful, whereupon the experienced Hood decided to "carry on" unaided. Nelson offered to assault Bastia with the "Agamemnon" and five hundred men. The result was an astonishing success, the citadel capitulating on 22nd May. Again Nelson's correspondence is full of enthusiastic praise of his chief. "All has been done by seamen and troops embarked to serve as mariners, except a few artillery under the orders of Lord Hood, who has given an astounding proof of the vigour of his mind and his zeal and judgment. His thanks (to Nelson) are as handsome as can be penned. Four thousand, five hundred men have

laid down their arms to under 1,200 troops and seamen ; it is an event as is hardly on record. Seventy pieces of ordnance, with an incredible quantity of stores, are taken. The 'Fortunée' was destroyed at Fiorenzo, the 'Minerva' taken, 'La Flèche' here, therefore three out of my four antagonists are gone. Every lover of his country will rejoice in our great and almost unexampled success, to the honour of my Lord Hood and to the shame of those who opposed his endeavours to serve his country."

It remained to reduce Calvi, and in performing this valuable service successfully, Nelson lost the sight of one eye. Immediately after Lord Hood was superseded in command by the more amenable Hotham, and went home.

"Oh, miserable Board of Admiralty!" wrote the disgusted Nelson. "They have forced the first officer in our Service away from his command. How the fleet must regret the loss of Lord Hood, the best officer, take him altogether, that England has to boast of. Lord Howe is certainly a great officer in the management of a fleet, but that is all. Lord Hood is equally great in all situations which an Admiral can be placed in." (Hood was, in fact, superseded because the Admiralty resented his outspoken criticism of certain flagrant abuses then prevailing in the Navy.) When, in March, 1795, the "Agamemnon" was engaged with the Toulon fleet, Hotham recalled her after she had captured two prizes, saying: "We must be content—we have done very well." Nelson could not refrain from the outburst: "Had we taken ten sail and allowed the eleventh to escape when it was possible to have got at her, I could never have called it 'well done.'"

Of the many critics who have maintained that Nelson's plan for the battle of the Nile was largely derived from Hood's plan in the West Indies, it may be permitted to quote Admiral Mahan—who, by the way, considered that Nelson's estimate of Hood "is as accurate as it is moderate in expression."

"It will be instructive to compare the disposition of Admiral Brueys in Aboukir Bay with those adopted by Lord Hood in 1782 at St. Kitt's Island, when expecting an attack at anchor from a very superior force. The comparison is historically interesting as well as instructive, for it has been said that Nelson framed his own plan, in the cogitations of his long chase, upon Hood's scheme for attacking the French fleet under Admiral de Grasse while lying at anchorage, from which he first drove it before occupying it himself. The parallel is quite complete, for neither at St. Kitt's nor Aboukir was the anchored fleet able to get substantial assistance from the batteries. The decisively important points in such a disposition, as in any order of battle, land or sea, are (1) that the line cannot be pierced, and (2) that the flanks cannot be turned. Hood thrust one flank ship so close to the shore that the enemy could not pass round her, and closed up his intervals. Brueys

left the same flank—for in both cases it was the van and weather ship—open to turning, with long spaces between the vessels. In his arrangement for the other flank for the lee ships, Brueys was equally inferior. Hood threw his right lee ships at right angles to the rest of the fleet, so that their broadsides completely protected the latter from enfilading fire. Brueys simply bent his line a little with a view of approaching the rear to shoal water. Failing thus to obtain a fire at right angles to the principal line of battle, the rear did not contribute to strengthen that, while, not actually reaching to shoal water, it remained itself in the air, if attacked.”¹

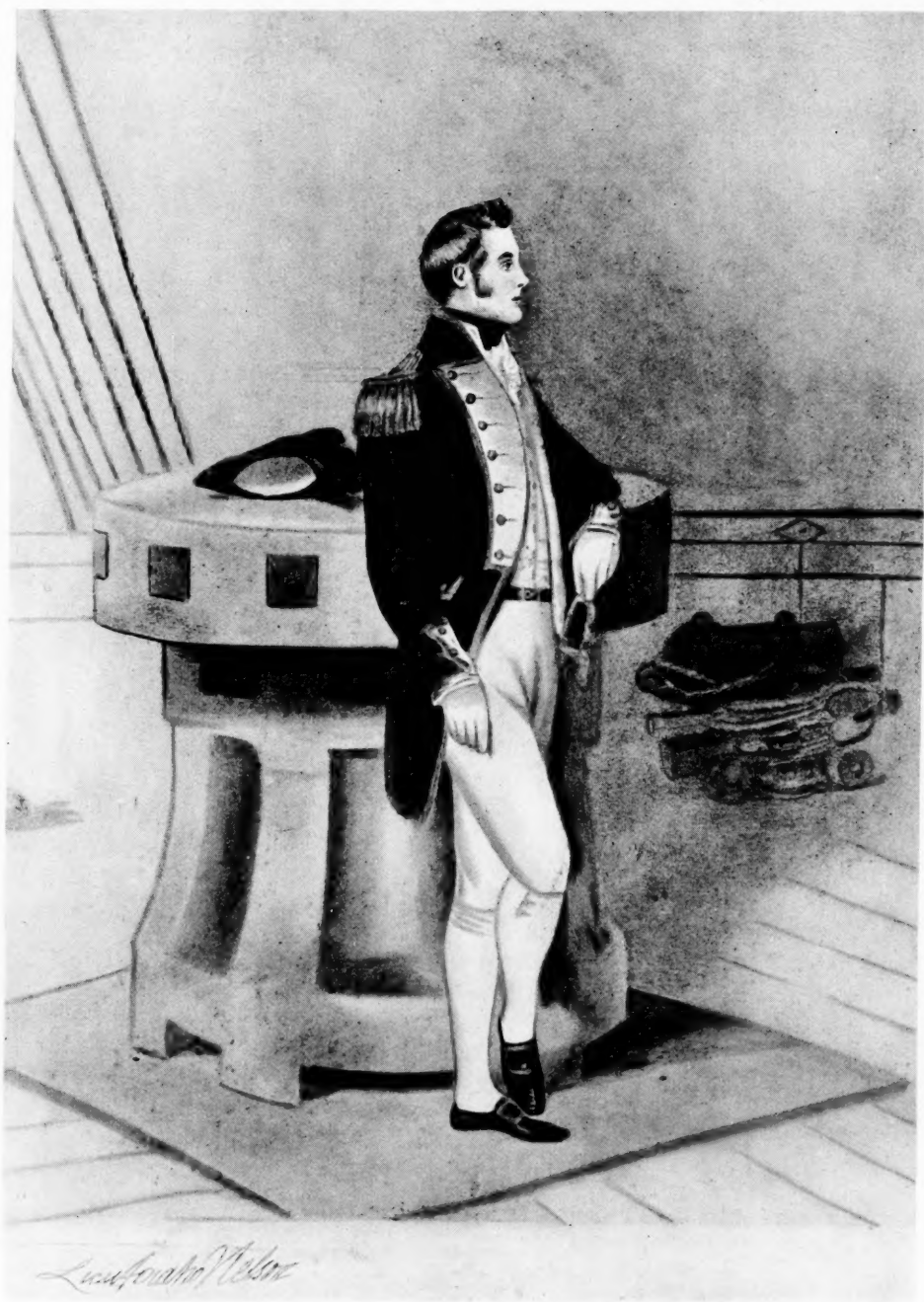
Hood never went to sea again after 1795. But he had the joy of hearing of his beloved pupil's successive triumphs of St. Vincent, the Nile, Copenhagen and Trafalgar. They met on shore, moreover, as frequently as the exigencies of Nelson's sea career would permit. It is characteristic of the latter's indomitable ardour that he wrote to Hood immediately after his injury at Calvi: “I got a little hurt this morning, not much, as you may judge by my writing”—he not yet knowing, of course, that the “little hurt” involved the loss of an eye.

Elected an Elder Brother of the Trinity House, Lord Hood accepted the Governorship of Greenwich Hospital, and in June, 1797, was created a Viscount in the British Peerage. Lady Hood was created a peeress in her own right in 1795, and she predeceased her husband in 1806. Their only son, Henry, who succeeded to the title, subsequently acted as Lord Chamberlain to Queen Caroline. It is particularly interesting to note that their grandson, Samuel, Lord Bridport, married a niece of Nelson.

The Admiral survived to the great age of ninety-one. He passed away on 27th January, 1816, and was interred with all honours in the old cemetery of Greenwich Hospital. In the picturesque phrase of General Viscount Bridport, his closing years had been spent “as Governor of the Royal Hospital, in the atmosphere of past battles, among veterans who had served with him and others, and who, in the winter of their days, still lived and revelled in the recollection of doughty deeds of war, fighting them over again by the fireside or in the sunny corners down at Greenwich in their well-earned repose.”

In delivering the eulogy on the hero of Trafalgar in the House of Lords on 28th January, 1806, Lord Hawkesbury made particular mention of Lord Hood as having “improved the talents and directed the spirits of enterprise and intrepidity of Nelson's earlier years.”

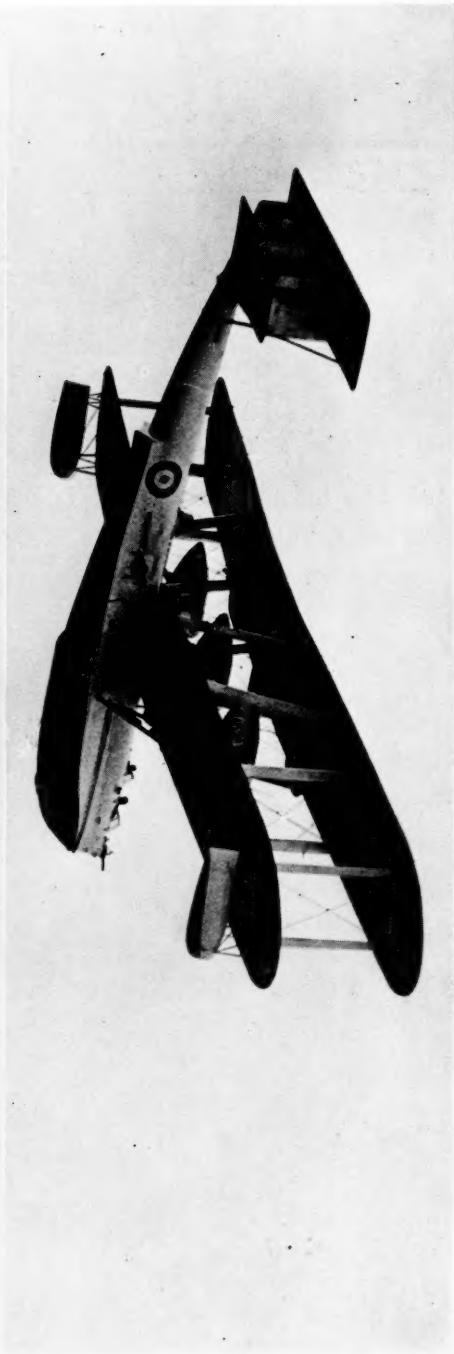
¹ Influence of Sea-Power on the French Revolution.



LIEUTENANT HORATIO NELSON

Reproduced from an original water-colour painting

by courtesy of Mr. James Falcke, 32, Duke St., Manchester Sq., W. 1



THE "IRIS," A NEW TYPE OF FLYING BOAT.

—FIVE SEATER; THREE ENGINES—

Constructed by Blackburn Aeroplane & Motor Co., Ltd

*(From a photograph supplied by
the Air Ministry)*

EVOLUTION OF SEAPLANES FOR WAR

By FLIGHT-LIEUTENANT B. C. H. CROSS, D.F.C., R.A.F.

The evolution of the seaplane may be broadly divided into three periods :—

- | | | |
|-------------------------|---------|-----------------------|
| (1) 1911 to 1914 | | Pre-War productions. |
| (2) 1914 to 1922 | | War-time productions. |
| (3) 1922 to present day | | Modern progress. |

Each period has shown progress, but progress has often been curbed by political necessity. The money available for expenditure does not inevitably improve the breed, indeed, during the War, advance in design was sacrificed on the altar of mass production. Wealth will provide quantity, quality is dependent on the brain that guides research into proper channels.

1ST PERIOD—1911-1914.

This may be described as the sporting period of flying, by government unfettered, but by government unaided. Contracts were few and far between, and the seaplane pioneer was almost invariably an enthusiastic, self-supporting optimist who gathered gratefully the plums offered in open competition by organizers or by newspaper proprietors. That the seaplane (or hydro-aeroplane, or water-plane, as it was variously called) was a potential war weapon was realised, discussed and exaggerated. In reality, little effort was made, or could be made, to adapt it to war purposes. However, during these three years was born the seaplane in all its various forms, as we know it to-day. A brief analysis of the historical milestones is of considerable interest.

Some doubt seems to exist as to who succeeded in leaving the water first, the claims of Henri Fabre to have flown on 21st May, 1910, near Marseilles not being generally accepted; there is, however, no question that the first successful flight was made by Glenn Curtiss at San Diego on 26th January, 1911. The lapse of ten years from the pioneer flights of the Wright brothers roughly represents the difficulty met with in substituting a form of floatation gear for the undercarriage of the land-going aeroplane.

Mr. Gnosspelius and Commander Swann, R.N. persuaded aircraft to leave the water in England during the same year, but the first British

seaplane to fly and alight successfully was the "Waterhen" at Bowness-on-Windermere on 25th November, 1911, the pilot being Mr. Stanley Adams. These British aircraft were, of course, valueless from a military point of view, having very short duration and performance, but before the end of the year American naval pilots had made the remarkable flight of 145 miles in the Curtiss "Triad" at a speed approaching fifty knots.

During 1912, a large number of aeroplanes were fitted with floats, and competed in various meetings in Belgium and France, but this country was not represented. It was at Tamise that the first seaplane built essentially for work from the water as apart from a makeshift undercarriage, made its public appearance. This was the small flying boat built by Donnet-Lévêque, its important characteristic being the use of a hull which combined the duties of fuselage and flotation gear. On 20th October, 1912, one was delivered to the Admiralty at Eastchurch; this was the first flying boat in British service. It was fitted with a land undercarriage capable of being lifted when it was desired to alight on the water; in fact, it was one of the earliest "amphibians," the prototype of the modern supermarine "Seagull." It weighed, without crew and fuel, 836 lbs., and with a speed of fifty-two knots, probably had a duration of less than three hours.

Curtiss also flew flying boats of his own design during this year, and one delivered to the U.S. army was reported to have had a useful load of 600 lbs., climbed to 1,200 feet in $6\frac{1}{2}$ minutes, and obtained a speed of 47 knots.

In May of the same year, Commander Samson, R.N., flew a seaplane, constructed by Messrs. Shorts, from Eastchurch to Portsmouth, and then on to join the fleet at Weymouth. This was the forerunner of the war-time product, and its main features, including the wing section and the float design, were destined hardly to be altered until 1918. This seaplane, fitted with a 100 horse-power Gnome, was capable of fifty-six knots, and had a useful load of 800 lbs.

In addition to the "Short" seaplane, Messrs. A. V. Roe delivered to Eastchurch one of their productions to the order of the Admiralty. At Olympia was exhibited the Sopwith flying boat. This is interesting, as besides being the first of its type to be constructed in this country, it differed from the principle adopted by the French and Americans in that the tail plane was held in position by outriggers. The accepted practice is at present on the lines of the original French design, but Curtiss adopted the Sopwith idea after the War, when he built the N.C.4 flying boat, which flew the Atlantic. During the year, one of the Sopwith Bat Boats, as they were popularly called, fitted with a lifting land chassis on the lines of the Donnet-Lévêque, won the Mortimer-Singer prize for a series of alternate alightings and take-offs from land and water. It was, without doubt, the finest amphibian of that day.

It is about this time that the difference in objective of our designers and that of our continental neighbours becomes apparent. We considered it necessary for our seaplanes to operate from water which was only moderately sheltered, the eventual goal being a seaplane capable of working from the open sea in fine weather. The French, who were the leading aircraft nation in the world, preferred to rely on their inland waters and sheltered rivers. The main difference was not merely the gaining of strength at the expense of performance, it aimed at extending the sphere of potential usefulness of our seaplanes. This attitude is largely maintained to this day, and if our performance has suffered slightly in comparison, we build seaplanes very much more seaworthy than those of any other nation.

Immediately prior to the war a Sopwith seaplane represented Great Britain at Monaco and succeeded in gaining the Schneider Cup at a speed of seventy-five knots. This seaplane is of peculiar interest, as on it was based the Sopwith "Baby" destined to be the "scout," or fighting type seaplane of The Royal Naval Air Service until 1918.

In summing-up the pre-War period, it will here be advantageous to consider the position of Great Britain in 1914. There were four constructors who had built British designed seaplanes which showed promise for future developments. These seaplanes had been primarily designed for work from the water and were not merely aeroplanes with floats added as an afterthought. There were approximately six French firms who had opened branch works in this country. There were four manufacturers who had essayed to build aero engines, and of these only the Green and Sunbeam companies were destined to produce war material in any quantity. This history of seaplane development is essentially dependent on the advance in aero engine design and quantity production. The position of Great Britain in 1914 as regards aircraft was bound up in the supply of aero engines, and for fully eighteen months we were compelled to rely almost entirely on France for our power units. Our Naval Air Service had about twenty experienced pilots and a collection of assorted seaplanes, of which probably thirty could be considered of any military value. The Germans had pinned their faith on the airship and their heavier-than-air craft were of secondary consideration. Their seaplane construction was hardly born; indeed, several Sopwith flying boats had actually been purchased from this country.

It appears probable that the most efficient seaplane then in service had a maximum speed of no more than sixty knots, a duration of four to five hours, a service ceiling of 3,000 feet, and a radius of action of less than one hundred miles. The surplus load available for armament was practically negligible. Naturally, the quest for seaworthiness was only in its infancy and seaplanes could only hope to take off in relatively calm water, and then, owing to their lack of power, after a run which was rarely less than a mile. Wireless had been tried as a freak experiment, and was quite unreliable.

2ND PERIOD—1914-1922.

The War period is remarkable for the limited advance in seaplane design. This lack of progress has frequently been attributed to the constructors, who seemed to be waiting on the aero-engine manufacturers for improved performance, instead of effecting radical changes in seaplane design. Probing deeper into the causes, however, one finds government necessity the dominant factor. It seems that it must have been decided to take three of the most promising existing seaplanes, put them into production and develop them with the experience gained. Aircraft were built by trial and error, only the rudiments of aeronautical engineering were known, and research depended largely on the efforts of individual firms. The Higher Command required the rapid production of large numbers of seaplanes, and then more seaplanes to make up the wastage. There was no alternative but to order in quantity the three seaplanes designed by Messrs. Shorts, Messrs. Whites, and Messrs. Sopwith. Later in the War, as will be shown, other factors retarded the development of the seaplane.

How did the Navy intend to use these seaplanes? It appears that the Short and the White seaplanes were intended to carry bombs, and that their main duties were to attack such targets as presented themselves or were within range. The Sopwith seaplane was a single-seater, had a speed of seventy-five knots, and was intended as a scout to ascertain enemy fleet movements. It had a radius of action of eighty miles. Wireless being undeveloped, the rapidity with which information could be passed depended upon the speed of the "scout" on its return to base or to surface ships. Its function was to be extended in 1915, when an offensive weapon against the Zeppelin was fitted. This consisted of an arrangement to drop Rankin explosive darts on to the envelope of the airship. No opportunity, apparently, presented itself for such an attack; the element of surprise entered into the operation, for a Zeppelin could be expected to outclimb this opponent if it sighted it in sufficient time. It must be remembered that the possibility of fighting between heavier-than-air craft seemed remote, and, at least until the beginning of 1916, the main defensive weapon carried on the seaplane was a revolver!

The idea of using a ship as a floating base had been tried in 1912, H.M.S. "Hibernia" carrying out the experiments. Early in the War, the "Ark Royal," an ex-tanker, was fitted with two steam cranes for hoisting seaplanes inboard and over the side. To meet the necessity for stowage in a limited space, Messrs. Shorts had already designed their wings to fold back on the fuselage. It seems probable that the long flush foredeck was purposely chosen to enable aircraft to fly off, but the speed of the "Ark Royal" was insufficient for the purpose. Incidentally, flying from the deck as a normal practice was destined to be held back for three years although the initial experiments were carried out before a seaplane had ever been flown, by Mr. Eugene B. Ely on the 19th January,

1911. He landed on the cruiser "Pennsylvania" in San Francisco bay, and took off again using a specially constructed platform 150 feet by 50 feet, the ship being anchored.

The speed of the "Ark Royal" was too low for fleet work, and she soon proceeded to the Near East where she took part in the Dardenelles campaign. Various faster ships were converted as seaplane carriers, the "Campania," "Engadine," "Empress," and "Riviera," following in rapid succession.

The improvement in performance of the seaplane and the failure of the bomb of that date gradually led to the experiment of carrying a torpedo, and a number of seaplanes were fitted for this purpose. By the time the initial trials were completed it was realised that the weather conditions in the North Sea were such that very few days occurred when seaplanes could be expected to take-off away from the shelter of land, and we find that by the end of 1915 raids from these waters were abandoned. In the other theatres of war, notably off Turkey, Palestine and in the Persian Gulf the weather permitted operations from the "Ark Royal," "Ben-ma-Chree," and the "Empress."

It is curious that so little was done with the torpedo carrier, only one success being recorded. A "Short" seaplane flying towards Constantinople had a forced landing in the Narrows, and the pilot was contemplating lightening the seaplane by dropping the torpedo when a Turkish transport hove in sight. Taxying towards the transport, which was quite unaware of the hostile purpose of the seaplane, the pilot torpedoed the ship, and succeeded with the lightened seaplane in taking off and returning to his base. During 1917, the Germans sent out one seaplane fitted with a torpedo into the Thames mouth, but by some happy chance this met some of our fighting seaplanes and was shot down. This fortunate incident apparently closed the enemy's experiments in this direction.

The problem of designing a float-seaplane to take off in even a moderate sea is very little nearer to solution to this day. The strains imposed on a seaplane attempting to take off in a heavy swell are out of all proportion to those imposed during flight, and the present writer is of the opinion, that unless some radical change, approaching the helicopter, or the development of the recent Spanish invention takes place, the use of seaplanes from rough water will continue to be impracticable. One is forced to the conclusion that a seaplane carrier in a fleet action must be very much limited by weather, and this has resulted in their being abandoned, for fleet work. The only example of a carrier sending up a seaplane in action was at Jutland, when the "Engadine" launched a "Short" seaplane. Although Admiral Jellicoe mentions the useful information obtained, the value of seaplanes, at that time, was eclipsed by the power of the Zeppelins to maintain more constant observation.

The Zeppelin was indirectly to have an important bearing on seaplane design. Long before Jutland the superiority of the German airship over

our aircraft for fleet work was realised and the Navy decided that only by having airships could they hope to start a fleet action on equal terms of observation. It is suggested that the decision to build airships for this reason was wrong. Apart from the impossibility of making up years of leeway from the time of the ill-fated "Mayfly," the enemy had no intention of fighting excepting in his own arena and at his chosen time. He was more concerned with the movements of our fleet than he was to prevent our learning his movements. No one would suggest that the construction of airships by Great Britain could destroy the enemy's airships or in any way interfere with his observation of our fleet. Nor can it be said that our airships could expect to observe his fleet on anything approaching equal terms, for he could decide within narrow limits the situation of an action, and such a position would, naturally, be within range of his fighting aircraft. We built some good airships, but by the time they were ready the vulnerability of the lighter-than-air craft was proved, and the work they were intended for was being carried out by seaplanes. The decision to build airships resulted in Messrs. Shorts dividing their attention between seaplanes and the new demand. Of all designers of seaplanes, Shorts had made the steadiest advance and had they been free to concentrate research on an extended radius of action, two hundred miles would have sufficed for the immediate emergency, seaplane development would have advanced considerably. Sopwith had been compelled to give his undivided energy to the production of aeroplanes, while Whites were concentrated on an experimental seaplane, which was never to go into production.

By the beginning of 1917 there were two types of seaplanes in general use. One was the "Short" seaplane, still retaining the main features and general appearance of the 1913 product, but improved in detail and performance. The second was the "Sopwith Baby," having the same lines as the winner of the Schneider cup, strengthened, but the performance virtually unchanged. The "Sunbeam" engine had become standard to the "Short," while the "Sopwith" was fitted with either the original 100 h.p. Monosoupape Gnome, or a 110 h.p. Clerget. Various "Sunbeams" had been produced to this date, and the performance of the "Short" had improved as it was fitted successively with 150, 160, 225, and 240 horse-power engines. Later, 260 and 310 horse-power engines were to be produced and fitted.

The main duties and the limitations of these seaplanes will now be considered :—

The "Short" was a general purpose aircraft fitted with wireless. It carried out :—

In Home waters.

- (1) Limited reconnaissance flights.
- (2) Anti-submarine patrols.

Abroad, in addition to the above :

- (3) Limited bombing raids.
- (4) Spotting for ship gun-fire.
- (5) Photography.

Its limited utility was due to the fact that it was an easy prey to enemy fighters, and it was useless employing this seaplane where it was to meet opposition unless it was defended by our own aircraft. Where reconnaissance did not take it into enemy waters much valuable work was still possible. During 1918, H.M.S. "Bendish" with two 310 h.p. Shorts covered 22,000 miles around the Canaries and Azores in eleven months. The seaplanes flew approximately four hours per day for fifteen out of every twenty-two days and the area under seaplane observation during one month equalled that carried out by the "Bendish" herself in the whole eleven months.

The "*Sopwith*" had completely changed in its original objective. Improvements in wireless, reliable within ranges of fifty miles, had ended the necessity for using the scout as such. The advent of aerial fighting found the "*Sopwith*" equipped with a machine-gun, and its purpose transformed. In addition, it was fitted to carry one bomb of 112 lbs for immediate action against enemy submarines.

The Flying Boat.—Although minor improvements continued to take place, the float-type seaplane was not to extend its field of usefulness, and it is to the flying boat which we must now turn. France, by sheer necessity, had concentrated on aeroplane design, and the advance made in seaplane design was negligible. The firm of Donnet-Lévêque merged its identity into the Franco-British Association, which produced single-engined flying-boats on the original lines. These flying-boats were built in both countries, but they were hardly used by us outside training schools. The Norman Thompson Co. built small type flying boats with both single and twin engines, but these saw little war service.

It is to America that we owe the conception of the large type flying boat as we know it to-day. During 1917, Curtiss delivered to Felixstowe the first H.12 flying boats. Fitted with Rolls-Royce engines developing 700 h.p., these boats had a maximum speed of nearly 80 knots, a service ceiling of over 10,000 ft., a duration of seven hours at a cruising speed of sixty-five knots without bombs, or a duration of five hours with 450 lbs. of bombs. The fully-laden weight exceeded six tons.

The main duties of these flying boats were outlined as extended anti-submarine patrols and long reconnaissance flights for naval co-operation, as by the end of 1917 wireless had advanced sufficiently to ensure two-way communication up to 80 miles. They had the advantage of being reasonably well defended by machine-guns, and could penetrate with a certain amount of immunity into enemy waters. They were not expected

to attack superior enemy aircraft, indeed the policy of such offensive operations was condemned and they had instructions to avoid fighting. The reason was, of course, the difficulty of replacements, added to the fact that they were out for information, and not offence.

The one great advance was the seaworthiness of the flying boat, which could alight in a moderate sea and remain afloat indefinitely. This may be instanced by an operation from Yarmouth. A high performance aeroplane was sent in the neighbourhood of Terschelling with the objective of attacking a Zeppelin. An H.12, accompanied the aeroplane in order to act as an aerial lifeboat. During the engagement, the Zeppelin succeeded in forcing the aeroplane to come down on to the water. The crew were rescued by the flying boat, which was, however, unable to take off again. The boat remained adrift for four days and nights before it was towed back to Yarmouth.

The H.12 had the advantage of the Zeppelin at low altitudes, and two attacks were successful, one enemy airship being accounted for from Felixstowe, and a second from Yarmouth.

A great deal of experimental work in flying boats had already been done at Felixstowe, and the "Porte" Baby, a three-engined boat had flown successfully, but was not entirely suitable for service. The F.2A. which followed the H.12 was an attempt to make the flying boat more seaworthy. The hull was "V" shaped instead of almost flat-bottomed. The effect of this was to permit the boat to remain on the water at greater speeds in a moderate swell, and thus prevent the flying boat bouncing into the air before it had sufficient speed to remain air-borne. The F.2A had a performance slightly inferior to that of the H.12, but it could be handled with greater ease and taken off a rougher sea. The "V" bottom has remained a feature of all later designs in this country.

For several months the long reconnaissance patrols remained unmolested, in fact, they almost invariably went out into enemy waters singly. From enemy accounts, there is little doubt that they were regarded as particularly unpleasant craft to attack. Eventually, the Germans put into commission a number of small Brandenburg fighter seaplanes. These were monoplanes of high performance, and, well handled, were formidable opponents. Our reply was to send out our flying boats in formations of three or five. The attack of such a battery of guns, leaving no quarter blind, was sufficient to daunt the bravest pilot. While the formation remained intact the enemy was powerless to prevent us carrying out the intended operation. In one running fight which exceeded two hours, eighteen enemy seaplanes attacked a formation of five flying boats. One flying boat was lost at a cost of five of the enemy.

The large type flying boat has one further advantage over the smaller type seaplane. It gives greater opportunity for accurate observation, both because of the clear view forward, abeam and astern afforded by its design, and by the division of duties amongst a relatively large crew.

Sea observation for long periods is necessarily monotonous and a severe strain. The increase of crew from two to five (the normal flying boat crew) improves the efficiency out of all proportion to the additional numbers.

One other War-time experiment is of interest. In order to increase the radius of action of flying boats and to use them with rapidity when occasion demanded, a number of flat-bottomed lighters were constructed for carrying flying boats. The lighters were towed astern of destroyers, and the flying boat could be floated off when required and taken into the air. Of course, such operations were limited to fair weather, and, even so, the swell normally met with in the North Sea off the West Frisian islands was sufficient to make the procedure uncertain. This system appears now to be abandoned.

Orders were placed for various experimental types. Although the designs were complete in 1918, their delivery dragged over the next four years. But two are worthy of mention. The first is the "Felixstowe Fury," a five-engined boat exceeding sixteen tons, flown in 1919, and the "Atalanta," a four-engined boat of 2,400 h.p. of similar weight flown in 1923. Although of limited military value, these aircraft have demonstrated that it is practicable to build far larger types which are controllable, and in which performance of a high degree is retained.

3RD PERIOD—1922-1926.

At the close of the war the seaplane (in which category is included the flying boat) had the reputation of having the performance of a poor aeroplane with the solitary advantage that it could remain afloat if forced to alight on water. With the improvement of aero engine design failure became more remote. By the use of multi-engined aircraft the possibility of a forced landing was expected to be reduced to something approaching a mathematical impossibility. The position of the seaplane was further aggravated by the costly ground equipment of slipways, the large handling parties required and the disproportionate time taken in emergency to get a flight away. It must be realised that it was the practice to bring all seaplanes ashore after flight and to launch them as required.

It was, however, perfectly clear that the seaplane could bridge a gap which the aeroplane could never hope to cross. During the close of the War, one flight of flying boats had been stationed at the Scillies and through lack of shore facilities was compelled to maintain themselves at moorings. Engines were changed and major repairs carried out on the beach, but for months on end the aircraft were exposed to the elements. That a certain measure of success was attained is the more amazing as the Scillies are notoriously unsuitable for such an experiment. If such freedom from elaborate shore organisation could be extended the seaplane could be made the most mobile unit of the Royal Air Force, for every coastline contains indentations with reasonably

sheltered water while far inland in four continents stretch wide navigable rivers and strings of lakes, all natural potential seaplane bases.

So, owing to its greater seaworthiness, the flying boat was chosen for development. In 1922 a cruise of four flying boats was undertaken along the South coast of England to the Scillies, brief periods being spent at Spithead, Portland and Plymouth. The boats were accompanied by H.M.S. "Ark Royal," which carried fuel, oil and spares, and laid moorings, and also by the first flying boat floating-dock. The flying boats were of 1918 design, and the cruise was purely experimental to ascertain shortcomings, and construct definite lines of development. The floating-dock was an effort towards producing a mobile repair and refuelling plant. It proved of the utmost value, and in war it could form a semi-permanent base with all necessary equipment and machinery at any desired position.

The results of the cruise were far-reaching. It was definitely proved that it was possible to maintain a flying boat afloat for a period of six weeks providing satisfactory moorings were available, that it could ride out a gale and heavy swell with suitable equipment, and that reasonable repairs could be effected with improvised shore facilities. From an experimental point of view all imperfections were laid bare. The necessity for overcoming deterioration due to exposure, the abnormal corrosion of metal fittings, the loss of performance due to soakage, the enormous wastage of labour due to leaky hulls and inefficient bilge pumps, the failures of two new types of engines subjected to repeated immersion in spray and the wear and tear of airscrews, were among the multitude of considerations for future designs.

After the 1922 cruise two years elapsed in the application of the principles to new designs, but, in the meantime, very considerable progress was made towards ascertaining the degree of mobility and the capacity of the flying boat to operate with a minimum of ground organisation. In 1923 an extended flight to Sweden was carried out, the flying boats being supported for a part of the operation by the "Adastral" a trawler converted as a seaplane-tender. In 1924 a flight of three similar boats was detached to investigate the possibility of observing herring shoals from the air, in co-operation with the Fishery Board for Scotland. From a piscatorial point of view this was not a success, but in five weeks of poor weather the three flying boats flew 12,000 miles and were never under tow. Unlike the previous cruises no parent ship accompanied them, and the total personnel was seven officers and sixteen other ranks which included the flying crews, a photographer and wireless operators for a temporary ground station which was erected. This was a saving of man power of at least sixty per cent. on wartime methods.

The present year saw the delivery of two of the new types, the English Electric Company's "Kingston" and Messrs. Supermarine's "Southampton."

Since the "Southampton" is at present the standard equipment of the Royal Air Force a brief description of its characteristics is of interest. It is fitted with two Napier Lion engines each developing 450 h.p. which can normally be relied on to run for 15,000 miles without internal examination. Their installation has been so simplified that six men have changed both engines, and had new engines tested in position in nine and a half hours. There is no complicated petrol system the fuel being fed by gravity from tanks in the top plane; no petrol is carried inside the hull. This not only tends to prevent fire, but gives ample space in the hull for a very complete wireless installation, a navigator's desk and free communication from bow to stern. It is fitted with three gun mountings, one in the bow and one on either quarter, the latter being staggered to improve the arc of fire astern. Two pilots are carried and either is able to leave his seat if he desires. On a long flight the advantage during "your watch below" of going into the still air in the hull, studying a chart or eating a meal in comfort, is a tremendous asset.

With a cruising speed of seventy knots it has a duration exceeding eight hours. It has a top speed approaching ninety knots, while what is more remarkable, its minimum speed is as low as forty-five knots at full load and forty knots if less heavily laden. The importance of the low speed is that it enables the flying boat to take off in a moderate swell with certainty. The type is very seaworthy, and will stand mooring out in quite heavy weather. The effort to combat deterioration proved so good that after one year its performance was hardly reduced.

The importance of the flying boat has not been lost sight of on the Continent, especially in the States adjoining the Baltic. Such boats as were produced were mainly for commercial purposes, and the loss of performance due to deterioration and soakage not only limits their immediate earning capacity but greatly increased the frequency and cost of overhaul. German designers had given considerable attention to metal construction during the close of the War, and it was natural that they should turn to this solution for seaplanes when works were opened in Denmark and Italy. An historical parallel to the passing of the wooden ship nearly a century ago is coming inevitably to aircraft, possibly in the next decade. So it is to Messrs. Shorts, of Rochester, that the honour belongs of constructing the first metal flying boat hull in this country. This was delivered in 1924, and was purely experimental being fitted with fabric wings of 1918 design. The metal used was Duralumin, an alloy of steel and aluminium, and it was protected from salt water corrosion by enamel and varnish. The experiment has given very promising results, the construction proving of great strength, and of superior durability to its rivals abroad, while corrosion has been very slight. It is probable that appreciable weight will be saved without loss of strength, while metal lends itself to mass production. It is a cheaper and more rapid method than when timber is used. In the past two

years "Southamptons" have carried out numerous operations on detached duties.¹

The only float type seaplane in production since the war is the Fairey. This was first delivered in 1918, and mainly owes any improvement in performance to the adoption of a higher powered engine. It utilises "wing-flaps" to insure high lift at low speed, and is essentially a type retained for seaplane carrier work and limited coastal reconnaissance. In 1924-1925 a flight in H.M.S. "Pegasus" successfully carried out an aerial survey of Malay. The Cairo Cape flight was carried out with these aircraft fitted with a land undercarriage, while floats were fitted for the concluding stages from Aboukir to England.

The amphibian has not yet achieved the popularity which was formerly anticipated. The Supermarine "Seagull" a small single-engined flying boat amphibian was designed for work from the decks of carriers, and did very useful work, but is now being superseded.

It may be asked whether the present service flying boat, had it been available in 1918, could have carried out more extensive duties than its predecessor was able to perform. It must be admitted that the radius of action, cruising speed and duration, although somewhat improved, do not lead one to believe that very much more could have been done. There appears to be one additional possibility. Ability to work from a temporary base would have permitted concentration of flying boats at any point on the British Coast within twelve hours, and this would have curtailed sudden local intensive submarine activity at an early stage.

If, however, the progress in this direction seems disappointing, the improvement in design of both engine and aircraft and methods of operation are of vital importance. One modern boat can be expected to remain in action, working from the water, for four times the period the wartime boat could be kept flying when nursed in a shed. In addition, it requires less than half the personnel, while the time taken to get a flight away in emergency is reduced to a fourth. By its greater seaworthiness flying is practicable from moderately sheltered water in any weather possible for aircraft. It can, therefore, be said that even if the utility of the seaplane has hardly increased the efficiency with which it can perform its duties has risen in the region of four hundred per cent. The further use of the seaplane for war depends on developing its mobility, its freedom from elaborate ground organisation, its range, and its performance. Its peculiar advantages, its useful load of weapons of offence and its strong defence, suggest that it will steadily increase its utility.

The value and practicability of the flying boat now having been established the next development logically follows. It is the extension of its range so that inter-communication within the Empire is independent of the friendly attitude of other nations.

¹ See Air Notes in this JOURNAL.

AIR AND GROUND FORCES IN PUNITIVE EXPEDITIONS

By CAPTAIN J. B. GLUBB, O.B.E., M.C., R.E.

THE necessity for air co-operation in all military operations is so obvious that the assistance of air forces in a subsidiary role now seems essential to the complete success of even the smallest punitive expedition. But it is not so universally recognised that, whenever aircraft are employed in small wars, a small ground force is necessary for the protection of aerodromes and dumps. Accordingly, it seems to be not without profit to compare the advantages and disadvantages of these two distinct methods of warfare, that is, of—

- (i) A punitive expedition in a semi-civilized country, carried out mainly by ground troops, under a military commander, but assisted by the complementary air units acting in a subsidiary role.
- (ii) Punitive operations in the same country, carried out mainly by air forces, under an Air Force commander, assisted by a number of ground units employed chiefly on aerodrome guards, sedentary garrisons and similar tasks.

Now the characteristics of punitive expeditions with ground troops are well known. The use of air forces for these purposes has, however, only been introduced during the last four or five years, and few military officers have enjoyed an opportunity of judging of its success at first hand. It is, therefore, proposed to institute a comparison of the two methods by enumerating the capabilities and limitations of the air arm for minor punitive purposes, occasionally pointing a moral by comparison with land operations under similar circumstances.

CHARACTERISTICS OF AIR FORCES IN PUNITIVE OPERATIONS.

(1) *Speed of Effect.*—The most striking quality of air forces is the speed with which they can be used. Refractory tribesmen at distances up to about 180 miles from the air base, can be attacked and defeated in five or six hours. Moreover, except in very mountainous country, the natural configuration of the area lying between the base and the enemy is almost immaterial. On the other hand, a land punitive column would take days, possibly weeks to accomplish such a task, including the possible outlay of large sums in roads, bridges, communications, etc.

(2) *Political Advantages of Speed.*—As is well known, any sign of delay or of inaction on the part of the Government usually exercises a most deleterious effect in semi-civilized warfare. Such operations as a rule commence by the revolt of some one section or tribe, while the neighbouring areas often postpone their decision until they see what success the first rebels obtain. The immediate defeat of the earliest offenders would, in the past, have stifled many a rising which subsequently developed into a small war. Such instantaneous action is, however, rarely possible with ground forces in semi-civilized country. Arrangements for collecting supplies, establishing communications, and accumulation of engineer and other stores will usually delay the date of the initial advance. Even when such an advance has once commenced, it may be necessary to build roads, bridges or railways as the columns progress. Every delay tends to encourage neutral tribes to join the rebels.

(3) *Concentration and Mobility.*—In addition to the power of bringing about a rapid decision before the trouble spreads, aircraft have the great advantage that they can be maintained concentrated. Their mobility enables them to control hundreds of square miles of country without forming any detachments. This result is rarely possible when the country is to be garrisoned by ground forces. The slowness with which the latter can come to the assistance of a threatened post usually renders it necessary to garrison a number of important points with detachments of troops. In the event of trouble, these are liable to be cut off and besieged. Frequently they may be overwhelmed before the arrival of relief, thus giving rise to a "regrettable incident." In semi-civilized warfare, such an initial success by rebels may cause large numbers of hitherto neutral tribes to throw in their lot against Government.

(4) *Unattractiveness of Air Operations.*—Many primitive races fight for amusement and for loot, more than to obtain any definite national ambition. After a few years of peace, life becomes so intolerably monotonous that anti-Government hostilities are decided upon. These tribesmen are usually experts at guerilla warfare and delight in such occupations as robberies, ambushes, cutting off detachments and looting the dead. Compared with such operations, hostilities against aircraft are very poor sport. The tribesmen fire away their priceless ammunition with no visible effect whatever, a process most lowering to their own morale. Even in the remote eventuality of a machine being shot down, little loot is obtainable—no rifles, no field glasses, no woollen clothing or boots. No neutral tribes will join the rebels in opposing air forces, because there is nothing to make out of it, whereas, if there is any prospect of cutting up a convoy or a ground column, all their adventurous spirits will be allured by the perspective of such loot.

(5) *Range of Air Forces.*—Medium bombers can at present operate to a distance of some 180 miles from their base without landing en route. They will also find ample time for identification of, and circling over, any

target; also for pursuing the enemy with machine-gun fire. If the intervening country is friendly, and petrol dumps and landing grounds have been established in advance, the radius from the base can of course be increased, subject only to the endurance of pilots and the length of available daylight. In the absence of such petrol dumps, should the ground be open and ample machines available, the radius of action can be somewhat increased by the following method. The attacking machines can be accompanied by transport machines, carrying petrol. The whole formation can land on a suitable piece of ground, to fill up the attackers with the petrol carried by the transport machines, which thereupon turn back. This expedient is especially useful when large areas of flat desert, suitable for landing, intervene between base and objective.

Fighter machines have a very much smaller radius than bombers, and cannot be used at great distances from the base unless some such expedient as the above is adopted.

(6) *Settlement of Terms of Surrender.*—Many semi-civilized races are experts in the arts of prevarication and bargaining for terms. If temporarily worsted, they will request an interview with Government, together with a safe conduct for their representatives to visit headquarters and discuss terms. Primitive methods of communication and transport usually give rise to considerable delays, once negotiations have been agreed upon. When the rebel representatives arrive, they often reject Government terms, and it then becomes evident that the request for a conference was made to gain time, with the object of recruiting fresh allies, or of removing flocks and property to a place of safety.

Such undesirable delays can frequently be avoided by the use of aircraft. After the first attack, notices can be dropped informing the inhabitants of the Government terms. Should the ground in the vicinity be suitable, the officer or official charged with the negotiations may be landed in the vicinity to confer with the chiefs. Should there be any possibility of treachery, however, other machines should circle overhead during the conference.

(7) *Limited Capacity of Aircraft.*—The uninitiated, on the other hand, are apt to calculate far too much on the capabilities of aircraft. So, for instance, they may be led to base their plans on the carrying out of three separate operations by the same aircraft on three successive days. They forget that there is a definite limit to such possibilities, and that, like all mechanical devices, aeroplanes require a certain amount of time for overhaul or repair. Should the minimum time necessary for such attention not be allotted to the machines, their efficiency very rapidly decreases. Engine failures, frequently resulting in crashes, become proportionately more frequent, while the extra flying involved in salving machines that have made forced landings and rescuing the personnel, yet further increases flying hours. Again, the knowledge that they are

being asked to fly over hostile territory with engines which have received insufficient attention, is most injurious to the morale of pilots. Thus, it is important to realize that there is a definite limit to the flying capabilities of any air unit, which it is uneconomical to surpass.

(8) *Effect of Physical Features and Nature of Inhabitants.*—The damage which can be inflicted by aircraft depends very largely on the nature of the country and of the enemy. Thus, in open country, heavy casualties can be inflicted both by bombing and, perhaps still more, by machine-gun fire, especially if low flying fighter machines with very high and accurate gun power can be employed. By means of bombing raids carried out on villages at irregular intervals of time, both by day and night, even though such attacks may not inflict heavy casualties, the enemy can be almost entirely denied access to his towns and villages, and be compelled to lie in concealment in the open country. Exposed to the inclemencies of the weather, he may soon find life becoming unbearable; and even when there is no infliction of casualties, destruction of property without any compensating opportunity of obtaining loot, is often sufficient to cause surrender. To achieve this end stone-built dwellings can often be severely damaged by high explosive bombs, while straw, thatch or reed hut villages can be burned down by the use of incendiary projectiles. Damage inflicted on mud-built villages, on the other hand, can usually be repaired again in a few days. Similarly, crops such as wheat, rice, barley or maize, are difficult to injure from the air, except in the rare circumstances of their being just ripe and dry enough to fire with incendiaries. On the contrary, flocks of animals can be made to suffer severe losses. Sheep form a particularly easy target, owing to the fact that they bunch into a compact mass when frightened. Camels and horses on the contrary scatter.

Inhabitants of mountainous or wooded areas are difficult to deal with from the air. Very often the utmost that can be done is to deny them the use of their villages by bombing the latter at irregular intervals. In some mountainous districts, the inhabitants take refuge in large caves, where they are almost inaccessible to air action, and can live in comparative comfort for long periods. The only manner of bringing such peoples to surrender is by upsetting their daily lives, cutting off communications and preventing them from cultivating their crops or grazing their flocks. It is difficult, however, to prevent them carrying out these tasks at night.

(9) *Identification of Target.*—A very serious difficulty in air operations of this nature is the correct identification of the target. The theatre of operations is frequently unmapped, or only roughly sketched, or the enemy may be nomadic with no fixed dwelling. Even should maps exist, the country may be so featureless as to render it difficult to locate one's position by map from the air. A ground force moves forward but slowly, and can be accompanied by guides and friendly natives. Such are rarely fitted to accompany an air raid; indeed it is not at all desirable

that they should do so. Thus the whole success of the operations may depend on the availability of an individual who combines thorough knowledge of the tribes and country, with a certain amount of experience as an air observer. The provision of such individuals should be arranged either from the civil political staff, or by offering inducements to selected R.A.F. or military officers to acquire the requisite knowledge.

The importance of this question of guiding air forces can scarcely be over-emphasized. A vast concentration of air forces, a complicated organization and great expenditure may well prove ineffective, merely for lack of an officer possessing sufficient technical local knowledge to guide the machines. It would appear most important to encourage R.A.F. officers stationed in semi-civilized countries to obtain a detailed knowledge of the local geography and of the districts situated across the frontier. In the event of a sudden outbreak of hostilities, they may be called upon at a few hours' notice to fly 150 to 200 miles and bomb a selected target. Knowledge of the ground, though of great value, is far less essential in the case of the officers of a ground punitive column, advancing only a few miles a day.¹

Moreover, the number of trained guides can never be excessive. The secret to success in such air operations is to strike a heavy blow quietly, and then maintain unrelenting pressure upon the enemy by a continuous succession of raids. In a large scale operation, formations of machines will require to follow one another at short intervals, in order to maintain the hostile tribes in a continuous state of apprehension. At the outset at any rate every such formation will require a guide.

It has been pointed out that the infliction of immediate summary punishment on the first rebels, will often extinguish the sparks of rebellion before they spread. The appearance of air forces a few days, or even hours, after the commission of the first act of aggression, and the fact that they select and destroy the offending village or tribe alone, and no other, has an overwhelming moral effect on semi-civilized people. On the other hand, if, as has sometimes occurred in the past, machines lose their way, and possibly attack a friendly or neutral tribe in error, the moral effect is liable to be most unfortunate. Thus the previous minute preparations of maps and plans, and the training of observers with technical local knowledge, is of the very first importance.

(10) *Discrimination Between Innocent and Guilty.*—Air operations against semi-civilized peoples have often been stigmatized as barbarous, on the grounds that they are liable to inflict casualties on guilty and innocent alike, and even perhaps on women and children. Such statements are usually made without a true knowledge of the facts.

¹ Note.—Systematic photograph survey from the air may assist matters considerably: this was done in Waziristan. [Ed.]

Thus in many cases of tribal insubordination, especially in fairly open country, the enemy can be brought to reason by the destruction of his property, and the disorganization of his habits. In such cases, the infliction of human casualties as tending to embitter the people against Government, is not only unnecessary but undesirable. The usual method is for a formation of aircraft to fly over the objective the day before attack, and drop copies of an ultimatum warning the natives that unless they comply with Government demands, air action will be taken.¹ Such a step often suffices to bring about surrender. Should this not occur, the inhabitants have time to evacuate their women and children. Operations will then be confined to the destruction of the abandoned villages, and possibly of crops, flocks or other property. If somewhat severer measures be required, a combination of bombs and machine-gun fire may be employed. One or two machines fly over the village or camp and drop two or three small bombs. This usually has the effect of causing the inhabitants to bolt from the village and scatter in the open. The remaining machines should be detailed to take advantage of the opportunity to engage the fugitives by machine and Lewis gun fire. Should fighter machines be available and the ground be comparatively open, considerable casualties can be inflicted by low-flying machines. These should be able to distinguish men from women and children.

As a general rule, only in the case of an enemy who has placed himself beyond the pale by atrocities against Europeans or peaceful inhabitants, will a heavy bombing raid without previous warning be justified. Even so, it is doubtful whether more non-combatants are liable to injury than is the case in any other form of warfare, especially where long-range shelling is employed.

Aircraft do not, as a rule, inflict very heavy casualties. Their tremendous moral effect is largely due to the demoralization engendered in the tribesman by his feeling of helplessness and his inability to reply effectively to the attack. Many tribes which would be prepared to endure heavy casualties in man-to-man fighting, will surrender almost at once on the appearance of air forces.

(II) *Determination of the Enemy.*—Should it be considered justifiable to carry out the first bombing attack without previous warning, heavy casualties may often be inflicted. When the first surprise is lost, however, it is difficult to inflict further serious casualties, unless the country is very devoid of cover, and fighter machines are available. As a rule, the operations will soon become limited to the destruction of property, the disorganization of the enemy's habits of life, and the shaking of his nerve by irregularly timed raids by day and night. Such tactics will usually be sufficient to cause the surrender of tribes which fight more or less for the love of it, or in the hope of loot. In the case, however, of peoples,

¹ Note.—Cases may occur where the entire tribe is illiterate; this might be the rule in parts of Africa. [Ed.]

either actuated by some deeper motive for resistance, such as religious fanaticism, or supported by exterior propaganda or even gifts of arms and money from outside, it may be impossible to obtain a decision by aircraft alone. In such cases, the armed occupation of the country by ground forces will be the only means of obtaining success. Against a determined and well disciplined enemy, the rifle and bayonet are, at present, the only finally decisive weapons.

(12) *Summary of Comparisons.*—The conclusions derived from the above discussion may be summarised as follows :

- (i) Aircraft used independently as a punitive striking force possess the inestimable advantage of being able to strike a rapid blow at a great distance. The advantage thus gained is two-fold—
 - (a) It may be possible to stifle an insurrection when it first breaks out. The inevitable delay consequent on the assembling of ground forces usually permits an extension of the disaffection before punitive action can be taken ;
 - (b) A considerable economy in time and money may be effected, especially if ground communications are bad. Considerable delay and expense would otherwise be incurred in the construction of roads and bridges and the accumulation of supplies for a ground column.
- (ii) An air striking force can be maintained concentrated, while its mobility enables it to strike blows at a great distance independent of communications. Ground forces, to secure an equal effect in distant localities, would probably have to resort to detached garrisons which are liable to be besieged or overwhelmed, and thus to give rise to " regrettable incidents " causing a rapid spread of the disaffection.
- (iii) Many primitive races fight for the love of the excitement and in the hope of loot. Aeroplanes afford such no opportunity for the practice of their favourite tactics, nor any prospect of loot. The inability of the tribesman to engage the aeroplane effectively induces in him a feeling of passive helplessness, which lowers his morale.
- (iv) The present range of medium bombing machines is some 180 miles from their base. If advanced petrol dumps have been established beforehand, this range can be increased.
- (v) The use of aircraft enables Government terms to be known far and wide by dropping proclamations, and neutralises all attempt on the part of tribal chiefs to spin out negotiations. The official charged with the negotiations can often be flown out to the recalcitrants instead of waiting for them.

- (vi) On the other hand, with a limited air force available, it must be recollected that machines cannot be called upon to fly indefinitely. Time is required for overhaul of engines.
- (vii) The effectiveness of the air weapon depends largely on the nature of the country and inhabitants. In open country it can inflict heavy casualties. Should the enemy possess stone or brick dwellings, reed or straw huts, or flocks of animals, considerable damage can be done. Against people whose wealth lies in agriculture or who live in mud villages less effect can be produced. In wooded or very mountainous country, the effect produced is still more limited.
- (viii) The identification of the enemy, especially in unmapped country, is by no means easy from the air, and requires the previous preparation of careful sketches or the services of an observer with technical local knowledge. In the event of the hostile section being surrounded by neutral or friendly tribes, an error may lead to most unfortunate results. Such errors can be far more easily avoided by a ground force.
- (ix) Air operations have been condemned in the past, as involving the risk of injuring women and children. As a rule, however, an ultimatum would first be dropped from the air, allowing time for the evacuation of non-combatants. The damage which may be caused to property will often bring the enemy to terms without the infliction of many casualties.
- (x) In the case of tribes who fight for amusement or loot, the infliction of damage to property will often bring about their surrender. Where, however, the enemy consists of determined fanatics or disciplined troops, or is encouraged by exterior gifts and by alien propaganda, aircraft will fail to obtain a decision. In such cases only the infantryman's rifle and bayonet will bring the enemy to his knees.

(13) *General Characteristics.*—The strategy and tactics governing air punitive warfare are the same as in the case of any other combatant forces. In certain theatres, small air detachments have occasionally been placed at the disposal of the local military commander. They have been used for weak scattered air raids and their failure to secure a decision has been held up to prove the inefficiency of air action. Subject to the above considerations of humanity to non-combatants, air operations (like all others) must be carried out according to the following principles :—

- (1) Surprise is essential ;
- (2) The application of overwhelming force, when a decisive blow is to be struck is imperative ;
- (3) The enemy must be given no rest once the operations have begun. A continuous series of raids at irregular intervals by day and night must be carried on, until the resistance is broken.

ASSOCIATION OF RETIRED NAVAL OFFICERS

By VICE-ADMIRAL F. W. CAULFEILD.

THE Association of Retired Naval and Marine Officers was re-constituted on Trafalgar Day, 1925, as a Welfare Society, and is daily increasing its membership and the scope of its activities. It now numbers nearly 900 retired officers of commissioned rank, and there is a large honorary membership of widows and dependants.

Aiming as it does to bring together all commissioned officers, after retirement, for the purpose of mutual help, it appeals naturally both to those whose circumstances are straitened, and to their more prosperous brothers.

The Association is fortunate in having secured the generous assistance of several eminent surgeons and physicians who as honorary officers grant consultations and carry out operations either free of charge or at greatly reduced fees according to the means of their patients. Other honorary officers include the auditor, solicitor and architect, all of whom are prepared to advise members in their several capacities. That these advantages are appreciated by the members goes without saying.

Few people outside the Service realise the difficulties which beset the retired naval officer whose circumstances necessitate his obtaining some form of employment to make both ends meet. Under present industrial conditions vacancies are scarce and applicants abundant, and a man with no previous commercial experience stands a poor chance of securing a lucrative post. Here A.R.N.O. can be and often is of great assistance as an intelligence bureau for both employers and those seeking employment.

Although pensions may be said to be more or less stabilized, many minor questions connected with them still crop up and are dealt with from time to time. In this matter the close touch which is maintained by the Association with the Ministry of Pensions and with the Admiralty has proved extremely useful and has produced excellent results.

The education of children, often a strain on the family exchequer, is another matter in which the Association helps its members. In some cases scholarships or bursaries have been granted to boys recommended by A.R.N.O.

To retired officers who contemplate emigrating to the overseas dominions and colonies A.R.N.O. is in a position to be of use as it has corresponding members in all parts of the world.

It may therefore be said that the single object of the Association is the welfare of the retired naval officer and his dependants.

The annual subscription is £1, and full particulars will be sent on application to the offices at Empire House, 175, Piccadilly, W.1.

ROYAL HOSPITAL, CHELSEA

By MAJOR-GENERAL H. C. SUTTON, C.B., C.M.G., Lieutenant-Governor
and Secretary.

THE Royal Hospital buildings are so familiar to everybody that it is not necessary to describe their appearance. It may, however, be stated that the North side of the Centre Court contains the Great Hall and Chapel, the East and West Wings consisting of "Long Wards" occupied by the In-Pensioners. At the Southern end of the East Wing is the Governor's residence containing the State Room.

The Hospital was built on the site of King James's College; an ecclesiastical foundation of James I. The building was seized by the Commonwealth, and used for various purposes, among others the internment of Dutch prisoners of war. At the Restoration, the College was handed over to the Royal Society, who apparently made no use of it. It was then bought by Charles II with a view to building a hospital for old soldiers. This idea probably originated with Sir Stephen Fox, who had been Paymaster-General to the Forces, but tradition attributes to Nell Gwynne the suggestion that the King should use the site of Chelsea College for the establishment of Chelsea Hospital.

Sir Christopher Wren designed the present building and presided over its completion.

The Royal Hospital has been used at various times for purposes of State. In June, 1795, the Turkish Ambassador, Yusaff Adijah Effendi, was received and entertained by the direction of King George III by the Governor of the Royal Hospital, prior to his taking part in a State procession from the Governor's house, to present his credentials at St. James' Palace. There was afterwards considerable discussion as to who was to pay for the entertainment of His Excellency, the Chelsea Board refusing to do so.

In January, 1808, the Great Hall was used for the trial of General Whitelocke, with regard to his conduct at Buenos Ayres and Monte Video. Again in November, 1808, a Court of Enquiry sat there to investigate matters in connection with the Convention of Cintra.

The Duke of Wellington lay in State in the Great Hall from 10th to 17th November, 1852, the Hall being completely draped in purple. The table on which the body lay is still preserved in the Great Hall.

In 1856 a Court of Enquiry sat in the Great Hall to investigate the Crimean Reports of Sir J. McNeill and General Tulloch.

The Great Hall was also used from time to time for an examination room for military candidates, but this was found to interfere with the comfort of the In-Pensioners, and was discontinued. There may be still living some officers who sat for their Army Entrance Examination in this fine oak-panelled Hall.

On February 16th, 1918, the hand of war struck the Royal Hospital, a German bomb falling on the Eastern end of the Hospital, killing Captain E. Ludlow, M.C., Captain of Invalids, as well as four other persons, and causing considerable damage to the building.

OBJECTS OF MILITARY INTEREST.¹—The Colours and Eagles captured in war, and now in the Chapel, Great Hall, and in the Vestibule between the two, are, perhaps, the objects of the greatest Military interest in the Royal Hospital. A description of them is contained in a Colour book presented by Her Majesty Queen Victoria to the Royal Hospital in 1861.

The Hospital also possesses a collection of Medals which have not been claimed by the next-of-kin on the death of the In-Pensioners.

In the Centre Court stands a statue of Charles II by Grinling Gibbons in the garb of a Roman soldier. On Oak-apple day, 29th May, on which day the In-Pensioners are inspected, the statue is covered with oak boughs.

Some captured guns stand in the South Terrace.

Among the objects of interest not of a purely military character are fine pictures of Charles I and his family, by Van Dyk; James II, William III, George I, by Kneller; Charles II, Catherine of Braganza, James Duke of York, by Lely. These are hung in the State Room in the Governor's residence. A large painting occupying the whole width of the West end of the Great Hall depicting Charles II on horseback with other figures, with the Quadrangle of the Royal Hospital in the background. This picture was commenced by Verrio and finished by Henry Cook. In the Chapel, there is a large fresco over the altar representing the Resurrection, by Sebastian Ricci; also a service of Communion Plate of silver gilt of the date of James II, bearing the Royal Cipher.

IN-PENSIONERS.—The organization of the Hospital for In-Pensioners is as follows:—

The *Board of Commissioners*, of whom the Paymaster-General, for the time being, is chairman, direct the general affairs of the Hospital. The Board meet once a week to deal with all important matters concerning In-Pensioners and Out-Pensioners, and the administration of the Hospital.

¹ The Editor regrets that the enumeration of many historical associations and objects of interest connected with the Royal Hospital has had to be curtailed owing to pressure on space.

List of Officials.—The Hospital has a Governor, Lieutenant-Governor and Secretary, Assistant Secretary, Physician and Surgeon, Chaplain, Adjutant, Six Captains of Invalids, Deputy Surgeon and Quartermaster.

Other appointments are :—the Matron, the Organist, the Whitster (superintendent of laundry), Sergeant-Major, Quartermaster-Sergeant, Master Cook, Dispenser, Park Keepers, Nursing Staff of the Infirmary and of the Long Wards, Office-Keeper and Messengers.

The conditions of appointment to the various posts, and the nature of the duties are laid down in the Royal Warrant for the Government of the Royal Hospital.

The In-Pensioners are formed in six companies, one under each Captain ; the total establishment being six Colour Sergeants, twenty-four Company Sergeants, twenty-four Corporals, six Drummers, fifty Privates (1st class), fifty Privates (2nd class), three hundred and ninety-eight Privates (3rd class). There are also a certain number of Out-Pensioners employed as Constables, Fatigue Men, Cooks, Orderlies, etc., doing work which is beyond the capacity of the In-Pensioners.

The candidates for In-Pension must be Out-Pensioners, i.e., in receipt of either a service, disability, or campaign pension. Candidates must be fifty-five years of age, unless through loss of limb or other disability, the result of Army service, they are considered eligible for admission to In-Pension at an earlier date. Candidates must have no dependent relations. If they have such, the dependents must certify that they will make no claim on the In-Pensioner. In-Pensioners must have a satisfactory character in the army and after leaving the army. It is not possible to admit men who are incapable of looking after themselves for physical or other reasons ; candidates must, therefore, have a medical certificate as to their fitness for admission. In-Pensioners may leave the Hospital and revert to Out-Pension if they so wish, but unless there are some exceptional reasons such men are not again admitted to In-Pension.

The In-Pensioner's duties are light, and they have considerable liberty. They are given liberal furlough, and in many cases they are invited by their late Units to the celebrations of Regimental anniversaries. As regards recreation, they have a good library, ample facilities for indoor games in the Great Hall and Non-Commissioned officers' room, and a certain number of gardens. There is a bowling club, and the proprietors of places of entertainment are liberal in sending invitations to the In-Pensioners. They receive small sums of money as allowances at rates laid down in the Royal Warrant. In summer they wear red and in winter blue uniform. On Church Parade and on ceremonial occasions they wear the cocked hat. The uniform of the In-Pensioners has varied very slightly since the foundation of the Hospital.

There are, at the time of writing, four In-Pensioners who are survivors of the Crimean War, and seven of the Indian Mutiny.

OUT-PENSIONERS.—The present system of Out-Pensions originated in a Warrant of James II which became effective on 1st January, 1685. It made provision for (1) officers, (2) non-commissioned officers and soldiers, (3) widows of those killed in the "fight." The Warrant handed over the whole administration to the Commissioners of the Royal Hospital though eventually the second-class only was committed to their charge. At first the intention was that this class should be accommodated in the Royal Hospital itself, but as the building of the Hospital progressed it was found that there would not be sufficient room, and that a certain number would have to remain outside until vacancies occurred. These men, to distinguish them from those in the Hospital were called "Out-Pensioners."

Pensions at that time varied according to the various grades from 5d. to 12d. a day. From June, 1713, however, in order to effect economies after the Marlborough Wars, all pensions were reduced by the Commissioners of the Royal Hospital in virtue of the authority generally vested in them to a uniform rate of 5d. a day, apparently without the issue of any Royal Warrant. The only exception to the above were certain individuals who procured a Special Royal Letter, and were known as "Letter Men" receiving 12d. a day.

It may be noted here that William III instituted Invalid Companies, which were stationed at Chester, "Tinnmouth," Windsor and Greenwich. Before 1702 these companies had no connection with Chelsea, at that date, however, they were placed under the Chelsea Board.

Prior to 1754, pensions appear to have been paid irregularly, sometimes yearly, or even at longer periods. In consequence, the pensioners were reduced to borrowing money on their pensions, thus getting into debt and frequently falling into the hands of money-lenders. In 1754, William Pitt, who was Paymaster-General, brought in a Bill to amend this state of affairs. At the end of 1806, Mr. Wyndham brought in an Act effecting a revolution in the pension system. This Act laid down principles, some of which have lasted to this day. The various rates were no longer fixed as arbitrary sums, but depended on the length of service, climate, and in some instances character of the individual. In addition, the Act gave the soldier the privilege of demanding a pension. As a result of the Act, the pensioners who could not have previously received more than 5d. a day now claimed 2/- a day as a right.

Mr. Wyndham's Act was repealed in 1826, and all pensions were placed on the same footing as prior to 1806, i.e., a boon flowing from the bounty of the Crown, and not a legal right confirmed by Act of Parliament. With minor variations the Army Pension Regulations continued on much the same scale during the reign of Queen Victoria, showing, however, slightly improved rates as time went on and higher pensions for Warrant officers when that grade was instituted in 1881. A feeling that something

should be done to assist needy war veterans in their advancing years was also shown by the grant of Special Campaign Pensions in 1891. A step forward, however, had been made nearly twenty years earlier in the way of special grants to Peninsular War veterans.

It was about the time of the South African War, however, that the improvement in the Army Pension Regulations became more evident, and more liberal pensions and grants were allowed. The provision of artificial limbs to men maimed in war was also sanctioned on a more extensive scale and appliances of a better pattern were given. During the South African War volunteers from all grades of society came forward to fight with the Regular Army, and this, no doubt, helped towards the improvement in pensions.

During the Great War, when the whole nation was in arms, the movement for better pension rates gained strength. Fresh Royal Warrants were issued giving much enhanced benefits, and finally Parliament decided to create the Ministry of Pensions, to deal, on liberal lines, with the claims of men who had been disabled in the Great War, and of their dependents. The Ministry of Pensions continues to deal with claims arising out of the Great War, under Regulations specially applicable to men who served during that conflict, and also with pensions awarded to men disabled in the South African and other earlier wars.

The Chelsea Commissioners, however, have always administered and still administer the Regulations affecting Long Service Pensions and Special Campaign Pensions, and deal with disability pensions other than those arising from the Great War and earlier wars. The pension scales as laid down in the present Royal Warrant administered by the Chelsea Commissioners are distinctly more beneficial to the soldier than the pre-war scales.

In approved cases, within certain limitations, an Army pensioner may be allowed the privilege of receiving a commuted sum in lieu of a portion of his pension, and the decision upon applications of this nature rests with the Chelsea Board. The number of men on the Army Pension List at the present time is approximately 103,000.

THE CADET MOVEMENT

BY CAPTAIN J. EADIE-REID,
1st Cadet Battalion, East Surrey Regiment.

THE Cadet Movement had been at work for a good many years in this country when, in 1923, the attention of the public was first seriously drawn thereto on account of the stir which was occasioned by the withdrawal of the financial grant and of the free issue of camp equipment, both previously made to cadet corps by the War Office.

This incident was followed, in 1924, by the promulgation of new regulations governing the constitution and work of cadet units. Finally, in July, 1925, the grant was restored to the total amount of a possible £15,000; this sum was then calculated on the basis of four shillings per head payable to the cadet company and one shilling to the County Association to defray administrative and other expenses.

It is sometimes not understood that cadet units are totally distinct from the Junior Division of the Officers' Training Corps and that they work on lines of their own. In the Regulations of 1924 it was laid down, with a view to securing a higher degree of efficiency, that, before gaining the official "recognition" which would entitle any cadet unit to the grant, every such unit must be affiliated to a unit of the Territorial Army. The remaining two conditions prescribed for this "recognition" were fixed at:—

- (a) The carrying out of annual training in camp or, as an alternative, a fixed number of attendances at drill;
- (b) The performance of certain drills outside camp and of musketry practice—the latter, however, being made optional.

A cadet unit is now defined as a formation of lads constituted "for the purpose of physical training through the medium of military instruction. The object of training lads is to develop in them the principles of patriotism and of good citizenship during peace and to fit them, in the event of a national war, to take their places in the defence of their homes and country." This all goes to show the importance now attached by our military authorities to the cadet movement, and how essential it has seemed to them that it should be set upon a sound basis and supported.

When the axe of economy fell upon the cadet units, in 1923, it appeared as though it might be impossible to carry on the movement.

Had it not been for the public spirit of certain headmasters of schools and of officers of the Territorial Force, a collapse of the movement appeared imminent and inevitable. In spite of grave difficulties the work was carried on at the cost of great personal efforts. An example of how these difficulties were surmounted was supplied by the camp of the Public Secondary Schools Cadet Association held at Winchester in 1924, when there came under canvas 55 officers and 747 cadets. The following camp was held at Cheltenham in 1925; it was attended by 67 officers and 1,177 cadets—this being an increase of 442 cadets. It should also be remembered that during this year a large body of cadets also made an excursion to the battlefields of France.

The War Office has expressed its satisfaction to the Association in the following terms: "The Army Council is fully alive to the valuable work carried on by the cadet organizations of the Public Secondary Schools Cadet Association, both by the officers and by the cadets themselves; it is realised that the objects in view and the results obtained are of the utmost importance to the youth of the nation. Primarily it is felt that the value of the cadet movement is educative, both socially and morally, and the fact that the cadet force is administered by the War Office must not be allowed to stress unduly the military side of the movement. On the other hand, it is the firm conviction of the Army Council that should any national crisis arise, the discipline and instruction imparted by the cadet training might well be of the utmost value. It is realised that the small financial support hitherto afforded to cadet organizations from Army funds has produced the impression that the interests of the cadet force are regarded with apathy.

"The Army Council wish most specifically to dispel this impression and, while regretting that owing to the present financial position no increase in grants can be made, they wish to convey to all concerned their lively appreciation of, and interest in, the Cadet Corps in Public Secondary Schools and to impress upon them that officers and cadets alike are carrying out work of the greatest national importance in which they should not allow themselves to be discouraged by temporary difficulties."

But the movement, although prospering, still needs encouragement.

The question of the large camp, as against the small or private camp run by individual corps, has been a matter of much discussion, but there can be no doubt as to the value of the training imparted in the larger camp. Discipline is, of necessity, more strictly enforced and a better feeling runs through the camp when its aims and organization are more clearly brought home to the lads. Every cadet feels that he personally has a share in its success, and he consequently makes an attempt to behave in such a way as to ensure its smooth working. This result can only be attained by some general display of unselfishness. Parading as a division is more beneficial than a similar exercise performed by a

company, provided that the task and the routine corresponds to that observed during the school year. The scope of the operation is enlarged and the moral effect is greater. Again, in divisional camps the field day covers a wider area than is possible at home. Night operations are attempted with better results. Both officers and cadets are animated by a more serious spirit, for they feel that this training in camp is the climax of the whole drill done during the year. Inspecting officers visiting cadet camps are usually much impressed with the thoroughness of the work that is put in by these units. General discipline is generally reported as being high; while the steadiness on parade of the cadets is usually commented upon in terms of praise.

In addition, examinations for Certificate "A" are held at all camps held under the auspices of the Public Secondary Schools Cadet Association. In 1924 out of 41 cadets standing at this examination not less than 40 passed; in 1925 the number was 66 out of 71 candidates. Part II of that examination is also held during the school year. Musketry, although its performance is optional, constitutes no small feature of the training and has been enthusiastically taken up. Wherever a Cadet Corps has been unable to secure a rifle range it has always been found that the drill hall range of the "parent" Territorial unit has been placed at its disposal.

It is, however, in the matter of equipment that there exists much ground for complaint. There is not a single C.O. of a cadet unit who does not long for better equipment—particularly better rifles. It is, in fact, quite out of the question to expect really good results in musketry with a supply of rifles that are of various patterns, not to say mostly quite out of date.

Lastly, there is a very different matter that still leaves something to be desired: in spite of the assistance given to the cadet force by Territorial units, it is regrettable that the number of Territorial recruits coming in from among boys who have left school, after passing through a Cadet Corps, does not show a high percentage. It is, of course, necessary to allow for the interval that occurs between the moment when the cadet leaves a secondary school and that when he becomes eligible for enlistment in the Territorial Army. In returns made out by C.O's. of cadet units regarding the numbers that have entered the Territorial Army, it is, for obvious reasons, quite impossible to give exact figures owing to the time during which a cadet is apparently "lost." Nevertheless, even in spite of this leakage, a number of cadets have enlisted, and, in any case, no attempt is spared to induce them to do so. Moreover, it cannot be overlooked that the cadet force numbers some 60,000, while there is a steady flow of cadets passing through its ranks. Accordingly, there must certainly exist throughout the country a large total of young men who have received a real grounding in military discipline and training which could not fail to prove of true value in the event of any national emergency.

THE PROBLEM OF CHINA

By AN ENGLISHMAN IN CHINA

"IT behoves you, Oh King, to respect my sentiments and display even greater devotion and loyalty in future. Tremblingly obey, and show no negligence."

The recipient of this message was George III ; it originated from the Emperor of China. The body of the despatch explained at length why China must continue her historical policy of isolation, avoiding at all costs contamination from contact with outer barbarians.

The truth of the saying " Nothing in this world is single, all things with each other mingle," was, however, during the course of the last century to be rudely forced upon the Celestial Empire by the arrival of more and more foreigners. To-day the tables have been turned. It is the Great Powers who are striving to keep clear of the China vortex. It is they who are striving to avoid, but are being slowly but inevitably drawn into, the entanglements of the China problem.

This problem viewed from the point of view of the British resident in China is bewilderingly complex. Its solution, if one exists, can only be determined by weighing a number of factors, mainly psychological, whose values it is difficult to estimate with any degree of accuracy. For simplicity we will deal with these factors in the historical sequence in which they first occur.

Until the Revolution of 1911 the China problem was simple. It resolved itself into this : What is the best way of inducing or compelling the Central Government to act as required ? Into this period fall the First and Second China Wars and the Anti-Boxer Expedition of 1900. These wars could be, and were, made to pay for themselves by the imposition of indemnities : the Central Government was solvent.

With the new century, however, a new phenomenon appeared : in proportion as the Central Government became more and more responsive to foreign pressure so it became more and more impotent to enforce its will throughout the country. Cromer had experienced a similar difficulty in Egypt. In 1911 the climax came when the Revolution occurred and authority became definitely located in two separate entities, the Republican Party in South China and the Monarchist Party in the North. The complications likely to result from this state of affairs were

at once grasped by Great Britain with the result that H.M. Consul-General at Hankow after several days' pourparlers managed to fix up a truce, the interval being utilised for discussing terms of peace. As the result of these terms the Emperor abdicated, a Constitution was drawn up and Yuan Shih-Kai became first Premier, then President and virtual dictator.

Two facts are worth noting: (i) the success and comparative ease with which Great Britain acted as mediator: (ii) the friendly attitude at this time towards foreigners of the Southern, Kuo-Min-Tang or National Party. The latter published a proclamation at Wuchang which ran as follows: "Those who injure foreigners or fight the foreign volunteers at Hankow will be beheaded. Further, all those who protect foreign concessions at Hankow or guard Christian churches will be rewarded." One of the purposes, in fact, in the original Charter of the Kuo-Min-Tang, was "to cultivate friendly relations with foreign nations."

A reversion to a unitary authority in China was soon found, however, to be less complete than had at first appeared to be the case. The leader of the Southern Party, Sun-Yat-Sen, backed by a strong Parliamentary majority, fell out with Yuan-Shih-Kai, the newly-elected President. According to the new Constitution, which Yuan in his Presidential address had solemnly sworn to observe, all financial measures required Parliamentary sanction. Owing to this disagreement sanction was, however, unobtainable for a loan, the 1913 Reorganization Loan¹ of £25,000,000 which the President was busily engaged in negotiating with the foreign banks. As it was well known that the money would be utilised for fighting the Kuo-Min-Tang it is not surprising that the following appeal of Sun-Yat-Sen to the Diplomatic Body should have proved prophetic: "In the name of humanity I appeal to you to exert your influence with a view to preventing the bankers from providing the Peking Government with funds which at this juncture will assuredly be utilised as the sinews of war." The appeal, with the exception of America², fell on deaf ears, despite the fact that constitutionally the loan was invalid for the simple reason that one of the signatory parties was, in view of Article 19 (IV) of the Constitution, acting *ultra vires*.

The point to be observed, as it alone makes subsequent history intelligible, is the difference in the behaviour of the Powers in 1911 and 1913. In 1911 an attitude of strict neutrality had been observed,

¹For brevity only the Re-organization Loan is mentioned, but similar considerations with regard to the shouldering of debt apply to the so-called Nishihara Loans amounting in all to some Y250,000,000 floated by Japanese financiers in 1918 for the purpose of bolstering up Tuan-Chi-jui and the Anfu Party.

²Three years later, however, that is in 1916, the Continental and Commercial Trust and Savings Bank of Chicago floated a U.S. gold \$5,000,000 loan for the benefit of the Central Government of that day. As the money was, of course, squandered and has not yet been repaid, this further complicated the funding of China's debts.

monetary assistance to both parties being refused pending a conclusion of hostilities. Nevertheless, the Southerners were, from a legal point of view, rebels. In 1913 the Powers shifted their ground. The Revolution had introduced a regime of disorder, and so they decided to support through thick and thin the one man who appeared likely to re-establish public security. That a successful war would lead to a suppression of Parliament¹, as the only means of overcoming a hostile parliamentary opposition, was certain. That the suppression of that institution, once it had come into being, was not going to destroy that opposition but merely drive it underground, and therefore render it dangerously subversive, was equally certain. But what from the foreign standpoint was still more important was the fact that there was little doubt that that opposition when and where it found itself in the saddle would prove an implacable enemy of the Treaty Powers.

To sum up, in the eyes of the Southern leaders the struggle was a clearly defined issue between militarism and constitutional government, in the eyes of the Treaty Powers between government and chaos.

Those who had believed that Yuan would pilot the national bark to safety—though to what shore, whether that of a republic, constitutional monarchy, or despotism few hazarded a guess—were destined to disappointment. With his death² the old problem of dual authority reappeared. It reached an acute stage in the winter of 1923 as a result of the handling of the Customs' funds collected at the Southern Government's stronghold, Canton. In accordance with international agreements it is the practice for the foreign Customs' officials to collect these funds and remit them to Peking, the balance being handed over to the Peking government when certain debt obligations have been met. The Southern Government protested against this procedure on the ground that as hostilities existed between Canton and Peking these funds would be used by the latter for prosecuting a more vigorous war against itself. It was further pointed out that every dollar sent north made a relative difference of two dollars, as what one side lost the other gained. The protest was ignored (partly on the ground that debt obligations³

¹Too much importance should not be attached to the representative nature of this institution. At Newchwang, a town of 100,000 inhabitants, only 35 votes were recorded when electing a parliamentary representative. On the other hand, our own parliament has passed through a similar stage.

²This was caused prematurely when he had only attained the age of 55, by worry occasioned by the presentation of Japan's twenty-one Demands, which were drawn up on paper watermarked with machine-guns and 'Dreadnoughts', and were of such a crushing nature as to make Yuan's downfall almost inevitable.

³In these must be included the National Consolidated Loan Service (comprising many loans issued at heavy discounts to Chinese Banks) which by the irony of fate the Legations had themselves protested against being placed upon the Customs in 1921.

absorbed the whole of the funds so collected) and in consequence an attempt was made to take forcible possession of the revenue. It was frustrated by a concentration of foreign warships. The acrimony caused by this incident, which was freely interpreted as partisan, was utilised by Soviet influences to intensify a strong anti-British feeling¹ which finally reached maturity in the boycott of Hongkong. Soviet influences which are invariably anti-British may be regarded as a new factor, the importance of which it is difficult to estimate and is further complicating the Chinese problem.

But until the Civil War of 1924² the Chinese problem was, compared with its present form, still comparatively simple. Certain adjustments were necessary in order to placate the several claims of the Central, Southern and Manchurian Governments, but these Governments did in fact exercise some sort of shadowy authority over the greater part of China. To-day all that is changed. There are more than half a dozen virtually independent authorities amongst whom the phantom Government in Peking is too impotent to be assigned a place. There is Chang-Tso-Lin, the Manchurian War Lord, with his vast arsenal in Mukden; Chang-Tsung-Chang, Governor of Shantung—a province with a population equal to that of France—a rough untutored soldier who agrees with Solomon that a man should have as many wives as he needs; Feng-Yu-Hsiang, the Christian General of Cromwellian severity; Wu-Pei-Fu, a profound student of the Chinese classics; Yen-Hsi-Shan, “the model Governor” of Shansi, who has recently decided that arms and munitions are more deserving of his attention than anti-opium campaigns; Sun-Chuan-Fang, ruler of the provinces around Shanghai, a man of refined appearance who has previously indulged in much desultory fighting in Szechuan and Fukien; Chang-Kai-Shek, a native of Ningpo in the Yangtze Delta, who with Soviet assistance is conducting a campaign against the North; Tang Chi-Yao, Governor of Yunnan, who has for many years ruled that extensive province, and has attempted in unsuccessful expeditions to extend his influence to Kweichow and Szechuan; Chen Chiung-Ming, a journalist turned soldier (formerly a colleague and later an enemy of Sun-Yat-Sen), who is now reported to be leading a rabble force against Canton in an attempt to make himself once again Governor of the Kwang-Tung Province; and finally, there is Yang-Sen, many times Governor of the vast province of Szechuan, in which he is always conducting either a successful or an unsuccessful campaign; he is a man in many respects superior to his rivals, although his palate has probably been rather

¹This is also aggravated by fear that the linking up of the Kowloon and Hankow Railways, a scheme frequently advocated by Hongkong when seeking a settlement, would short-circuit the trade of Canton.

²Despite the facility with which mediation had in the past been accomplished, the Diplomatic Corps made no attempt whatever to use its influence to avert this catastrophe.

turned against the British Empire by his one-time adviser, Trebish Lincoln, the spy ; it is he, of course, who was responsible for the Wanh sien affair.

The China problem of to-day thus resolves itself to this : How is any foreign Government to induce or compel these several authorities in China to act as required ? But even presented in this form the problem assumes a false simplicity for the very reason that few of the persons named would dare to exercise effective control over their subordinates. There is yet another and very real complication. Not only is China split up into numerous quasi-independent territorial divisions, but its inhabitants may also be divided into two distinctive nations : there is the Westernised nation of the student class, and there is the peasant nation, unable to read,¹ and still in modes of thought and civilization living far away back in the middle-ages. A type of policy suited to one of these nations is likely to be entirely inappropriate for the other.

The first of these nations is anti-foreign for the following reasons. The major part, and the most active, of its members belong to the Kuo-Min-Tang and are of Southern origin, and hence it has become traditional with them to regard the Diplomatic Body as an ally of the North and therefore as an enemy. Again, the student, having a wider knowledge than the peasant, is more acutely aware of the privileged position of the foreigner which rests on Treaties in many cases badly in need of revision if they are to be equitable, but which cannot now be revised because there is no central Government with which to negotiate. The fact that under the provisions of these Treaties foreigners are at times exempt from taxation paid by their Chinese competitors and that while occupying the largest houses in many Chinese towns they contribute not a cent to the rates, acts as a source of grievance and annoyance to a nation which inwardly still retains some of the "hauteur" which characterises the quotation of the opening paragraph of this article. Were personal contact between foreigners and responsible Chinese more common these sources of friction might possibly be a little less dangerous, but it is a fact that diplomacy in the normal sense of the word scarcely exists in China. The number of foreign Diplomats who could so much as name by sight even half a dozen Chinese represent but a fraction of the vast Diplomatic Corps,² while those who can speak the Chinese language can be counted on the fingers of one

¹In Chinese this is rather a misleading expression. The peasant can frequently read pickings from the colloquial press, to accomplish which a knowledge of about 1,000 to 1,500 Chinese characters is required. To read fluently on the other hand about 4,000 to 6,000 characters must be recognised and a language understood which differs as much from spoken Chinese as Latin from English.

²For this Corps to sanction legislation, in so far as its extraterritorial members are concerned, unanimity is necessary so that the Brazilian Minister, who according to the 1925 Customs' Report and Abstract of Statistics represents a Power having only one subject in China, has the authority to veto its resolutions.

hand. The merchant shut up in the water-tight compartments of the Treaty Ports is absorbed in the routine of his work, clubs and sports, and has made no serious attempt to gain personal contact with, or learn the language of, the people in whose country he resides. The foreign Press also is conducted by Editors who rarely speak Chinese and who, whether for reasons of profit or personal prejudice, have adopted a strong and cynically anti-Chinese tone. The inevitable reaction is to be found in the anti-foreign attitude of the rapidly growing Chinese Press.

The power for evil of this institution should not be minimised. It is vastly augmented by the facility with which the most fabulous stories about foreigners, their countries, and their policies are accepted as authentic. When it is borne in mind that such a usually well-informed paper as the London *Times* referred on 16th September, 1926, to a detachment of naval ratings having left Hankow for Ichang by passenger train, there being no line whatever connecting those two ports, or that the *Sunday Times* in a recent article referred to the Chinese revolution as bloodless, although no less than ten thousand Manchus were butchered in a single night at Sianfu, is it surprising that Chinese papers, costing one farthing a piece, show an even greater disregard for fact when dealing with the British Empire? One has only to recall the ubiquity and intense fury of the anti-British movement in 1925, and the amazing rapidity with which it spread throughout China, to realise that the Press can, at times, enable this rapidly disintegrating Empire to think and act as a single coherent unit. Behind the Press campaign not only was there the sincere and convinced Nationalist and the disgruntled Chinese student, but there was also the hand of Soviet Russia, which, unlike the other Powers, is pursuing a clearly defined policy.

We have seen in 1925 what the stimulus of Soviet propaganda can achieve, although it is, of course, difficult to estimate to what extent the anti-British boycott might not have developed without its aid. In the September quarter of 1926 we have witnessed that propaganda reinforced by active military assistance from Canton. This introduces yet another and vital factor into the complex China problem. The situation is, of course, not entirely new; a military Academy controlled by Soviet officers has been in existence for some years in Canton, while more than twelve months ago, Feng-Yu-Hsiang was receiving machine-guns and military advisers from Russia; but what is new is the amazing military success with which this policy has, in the last quarter, been crowned, and the threat it offers to British interests in China which are mainly concentrated in the Yangtze Valley. Whether this success will prove, as ephemeral as the usual Chinese victory it is as yet too early to determine. Two facts in this connection should be borne in mind. The Soviet has struck out a line of conduct which, owing to the Arms Embargo, she alone amongst the Powers is free to follow. In 1919 the other nations agreed to desist from supplying, or allowing their nationals to supply

arms or military assistance to any faction in China. Russia rejected this self-denying ordinance, and has in consequence been busily engaged in shipping munitions from Vladivostock to Canton.

The second fact to bear in mind is this. The more the Soviet openly assists one faction in China the more will it become the traditional enemy of others: witness in this connection the recent demand by Chang Tso-Lin for the recall of Karakhan, the Soviet Envoy at Peking, the closing of Soviet schools in Harbin, and the seizure of Soviet ships on the Sungari.

The most serious result of the Southern advance is, from our point of view, its detrimental effect upon British trade. Hatred of Great Britain has become traditional with the Canton Government, as we have seen, for much the same reason that until a few years ago it had become traditional in Southern Ireland. Indeed the Irish and the China problem both have this in common: a detestation of Great Britain for withholding or thwarting autonomy. The Irish problem, despite gloomy forebodings to the contrary, has been solved by a reversal of this policy. The Chinese problem, in so far as the maintenance of friendly relations is concerned would probably be enormously eased were Canton to be afforded full and unstinted recognition by some such act as the grant of a plenipotentiary title and status to the British Consul-General at Canton for as long as the Southern Government maintains an effective independence. Such a policy would, of course, involve new arrangements (is it not the absence of these very arrangements which is so imperilling our position in South China?) with regard to shouldering a portion of the national debt and collection and retention of local customs dues as was indeed the case with Ireland¹. It would definitely end the absurd and degrading fiction by which the Diplomatic Corps protest to Peking against acts of misconduct committed by Peking's enemy-in-arms, the Canton Government. Such protests rather than acting as deterrents must tend as an encouragement to misbehaviour in order to heap coals of fire on the head of a foe. While it is not claimed that recognition would remove many of the causes of the chaos which at present exists at Canton, or that it would enable a weak Government to exercise effective control, it is suggested that even a weak Government is likely to prove of more service as a friend than as an open enemy, and that a deep trade depression resulting from chaotic conditions should not further be intensified by an anti-British campaign.

It may be asked if the Canton Government is recognised why not half a dozen other Governments in China? The answer to this question is simple: there are not half a dozen other Governments which are in

¹Under such agreements presumably Canton would no longer be expected to contribute towards repayment of the Reorganization Loan as is at present the case or, at any rate, towards the pay of the Municipal Police in Peking as was the case in 1925.

open hostility to Peking and which have existed in that condition for the last ten years.

If life be defined as the "adjustment of inner to outer processes," the inner processes of our foreign policy have certainly been amazingly lifeless in their adjustment to the outer processes of reality: China is no longer a single State and our policy should be consciously adjusted to co-ordinate with that fact.

That the Cantonese have not always hated us is revealed by the following extract from a book entitled "The Fan Kwae' at Canton," describing conditions as they existed a century ago:—"I think I am correct in stating that from the novelty of the life, the racial good feeling and the unbounded hospitality always mutually existing; from the facility of all dealings with the Chinese who were assigned to transact business with us, together with their proverbial honesty, combined with a sense of perfect security to person and property, scarcely a resident of any length of time, in short, any 'Old Canton,' but finally left them with regret.

"In no part of the world could the authorities have exercised a more vigilant care over the personal safety of strangers; guards were stationed in various directions in the suburbs frequented by foreigners in order that any Chinese who might be troublesome could be driven off, or that they could escort back to the factories those who were uncertain of their whereabouts."

In all this welter of confusion—a vast country in a rapid state of disintegration—to what can the foreign merchant turn for ultimate security? There is the foreign fleet to guard his interests in the Treaty Ports, but its employment is always hazardous. It may stir up an anti-foreign agitation damaging to trade; it may even terminate in some sort of naval engagement, where ships, in a narrow waterway like the Yangtze, may be at a grave disadvantage against concealed land guns (as was exemplified at the Dardenelles) and of the latter China could, were it roused to a united effort, bring into action a very formidable array running into many hundreds. To-day the Chinese soldier has learnt to sustain a higher percentage of casualties, before retreat or surrender is deemed imperative, than was formerly the case. There is, too, the ugly question of foreigners scattered about the interior of China who in the event of a serious engagement would become hostages. It is essential to avoid naval commitments, in so far as possible, and when impossible to have a clearly-defined indisputable case in justification of the course of action followed. On the other hand, the argument that the interests involved do not justify the expense of their protection may be short-sighted: law is often extremely expensive to enforce, but the indirect consequences make its maintenance a paying proposition. We do not want intervention; all we seek is to attempt to afford some sort of police protection.

It was considerations of this kind which resulted in British naval action at Wanh sien on 5th September. Seven days previously Yang-Sen had piratically imprisoned six British merchant officers, retaining their two ships. The officers were apparently held as hostages in order to enforce his own terms in settlement of an incident arising out of the sinking of a Chinese sanpan full of soldiers who were attempting to obtain free passage on another British ship. Diplomatic means having failed, the officers in question were liberated as a result of direct naval intervention which, however, cost the lives of three naval officers and four men. A point connected with this incident is worth noting. Hostility to steamers on the Upper Yangtze is not new; owing to rapids, combined with a steamer's wash on a narrow and winding course, junks are unavoidably but continually being sunk.

The foreign merchant's interests do, of course, in fact, stretch far beyond the Treaty Ports where he resides: they are intimately bound up with the goodwill and the purchasing power of the Chinese masses. Although the former is, perhaps, less important than the latter, it, nevertheless, warrants careful consideration for the simple reason that it is more within the foreigner's power of control. Continual civil war, sustained by exorbitant taxation, is naturally reducing purchasing power: it is also, by rendering communication more and more uncertain, costly, and restricted, adding enormously to the difficulties of trade. As a result of its use and abuse by the military, rolling-stock available for commercial purposes is insufficient to meet the demand. As an instance it may be mentioned that the decline in the trade of Tsingtao for 1925, other conditions having been favourable, can only be accounted for by the fact that more than half the goods trucks of the Shantung Railway were transferred to other lines for military use. The situation is becoming daily more serious because, owing to lack of funds, the wastage of rolling-stock is not being made good. When Railway bonds, although redemption in many instances has actually commenced, are standing at from 40 per cent. to 70 per cent. below par, it is evident that no fresh capital will be sunk by the private investor in railway undertakings. Even the restricted space now available for the transport of cargo can frequently only be secured by paying exorbitant bribes to the local military and civil authorities controlling the railway area. With the gradual elimination of the railway for commercial purposes a fresh impetus is naturally given to inland water transport. The latter is, however, in many districts, hindered by innumerable barriers established by provincial authorities, and at times by brigands, while tolls are levied of such a magnitude as to render transport unprofitable. Moreover, foreign goods, which were formerly exempt, are being, with ever greater frequency, subjected to these illegal exactions.

Having dealt in historical sequence with the main factors in the China problem it will not be out of place here to give in the briefest outline the

political and military events of the past quarter, always remembering that these are often mere surface bubbles so transitory as, a few months later, to leave no trace of their occurrence.

At the opening of the September quarter the China stock market registered optimism. On June 28th a meeting of Chang-Tso-Lin and Wu-Pei-Fu had occurred in which it was arranged that upon the termination of the campaign against the Kuo-Min-Chun, Wu-Pei-Fu should conduct an expedition against Canton. In the latter quarter, it is true, the news was less reassuring, for Chang-Kai-Shek, the Commander of the Cantonese Army, had just delivered himself of a speech urging the boycotters to hold out to secure the restoration of Hongkong to China. His troops were reported as gradually moving northward and early in July as preparing to attack Changsha. It was hoped that a Yunnanese invasion of Kwangsi, by threatening his flank, would prevent further advance. However, on 11th July, Changsha fell, troops from Kweichow and Szechuan joining the conqueror's banner.

In the North a general attack had been launched on 10th July against the heavily entrenched forces of the Kuo-Min-Chün. Severe fighting ensued along a 30 mile front N.W. of Peking. At the beginning of August, Chang-Tso-Lin was reported as having suffered severe casualties in an assault on the Nankow Pass, while the troops nominally under the command of Wu-Pei-Fu had apparently acquired a strong distaste for engaging in further hostilities. At Tatungfu, in North Shansi, Yen-Hsi-Shan, the model Governor, had his garrison surrounded by Kuo-Min-Chün forces seeking to use his territory, and in particular the Peking-Suiyuan Railway, to assist them in shifting their base to Western China in the event of a forced retirement.

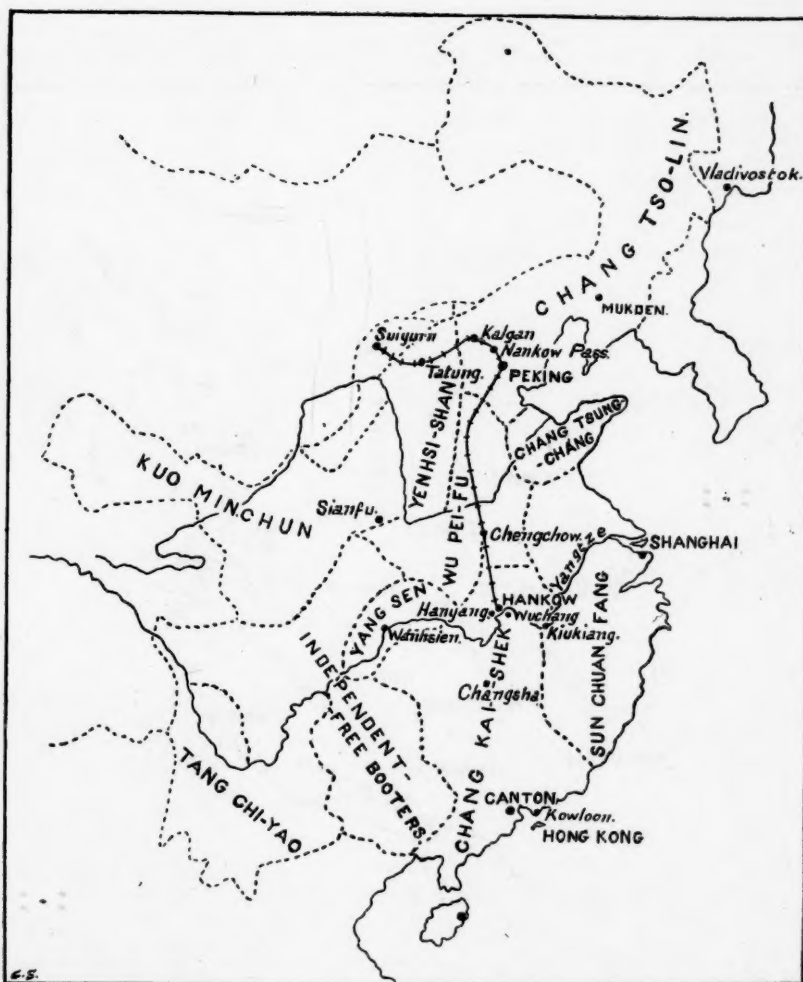
On August 16th, however, much to the general surprise, the Nankow Pass was evacuated, the Kuo-Min-Chün forces having fallen back in apparently good order, with few casualties. Kalgan was also evacuated before the Allied troops had time to arrive, guns and stores having been successfully removed. The siege of Tatungfu was raised.

This victory for the Allies in the North lost much of its charm owing to the critical situation which was developing South of the Yangtze where the victorious march of Chang-Kai-Shek, aided by the Russian General Gallent-and some two hundred Russian officers, was proceeding with alarming rapidity. Wu-Pei-Fu at once attempted to effect a rash concentration on Hankow by moving his northern army along the single line track of the Peking-Hankow Railway. The result was a hopeless traffic jam stretching over a distance of some 400 miles. In the interval, owing to the treachery of its Commander, Liu-Tso-Lung, Hanyang, containing the second biggest arsenal in China, passed on September 7th into the hands of the Cantonese forces. Hankow capitulated the same day, although Wuchang, with a garrison of some 5,000 Northern troops,

continued to hold out. Wu-Pei-Fu at once fell back into Honan, establishing his headquarters at Chengchow in the North of that province. Cantonese forces having followed up Wu's retreat to the borders of Honan, Chang-Kai-Shek directed his army towards the territories of Sun-Chuan-Fang. The quarter closed with the report of an engagement having taken place at Wusueh, 24 miles above Kiukiang, in which the Cantonese are reputed to have defeated some forces of the Shanghai war-lord.

The question will naturally be asked : how long may these conditions be expected to continue ? It is the opinion of the writer that the present process of disintegration will increase rather than diminish¹. It is like a chemical process as a result of which ultimately some new political compound may be expected to emerge though of what nature it is as yet too early to hazard an opinion. However dark the outlook, there are, nevertheless, certain grounds for optimism in the abundant resources of the country and the business acumen and enterprise of its industrious millions. That China possesses an amazing commercial vitality is revealed by the fact that, despite her present confusion, her last year's Customs revenue attained the record figure of seventy million taels. Whatever happens politically her trade may therefore be expected to go on and, unless conditions become far worse than even they are to-day, to continue to register records in the years to come.

¹Unless, of course, it can be checked by the Great Powers playing a really effective rôle.



PREDOMINANT INFLUENCES IN CHINA

This map is only intended to give a general impression of the political and military influences in China. The actual boundary lines are, of course, quite indefinite and constantly changing; nor do the areas represent the numerical strength of the population within them.



PROVINCES OF CHINA

THE STRENGTH OF ENGLAND

"The first Article of an Englishman's Political Creed must be that he believeth in the Sea . . . and, if we have of late suffered Usurpation of other Methods contrary to the Homage we owe to that which must preserve us, it is time now to restore the Sea to its right."

THIS extract from a quotation printed on the fly-leaf of Mr. G. F. S. Bowles' "The Strength of England,"¹ epitomises, in words written by Lord Halifax in 1694, the thesis of a very remarkable book.

The subject and the manner in which it is treated are of such wide interest and of such vital importance that they cannot be dealt with adequately in the form of an ordinary "review," nor will this publication appeal solely to naval students. On the contrary, it is no exaggeration to say that it should be read not only by every officer in all three fighting Services, but by every educated man, woman and child throughout the Empire, for it goes to the very root of our national and imperial existence.

In these days, when a large proportion of the public will only imbibe information if it is served up in the same tabloid form as their daily news, one would like to see the essence of Mr. Bowles' facts, arguments and conclusions compressed into a small popular edition; but the more serious student will not cavil unduly at a tendency to repetition which is the slight literary defect of an otherwise brilliant work. Every chapter and page are so full of interest that the careful reader cannot fail to feel a wiser man and a better Englishman when he reaches the last line.

The author starts by demonstrating the unique position of Britain as the "sea centre" of the world, a position which should ensure our commercial prosperity for all time; and he goes on to show that it is to the sea we must look, not only for our own preservation, but in order to exert our powerful influence to maintain peace on earth.

We are reminded of the essential differences between Sea Power and Land Power and how history has shown again and again that the latter, in the long run, can never avail against the former.

From historical survey, we pass to the Great War, and here we find one weak spot in the author's contentions, although it does not lessen the force of his ultimate deductions. He over-estimates the power

¹Methuen & Co., Ltd., London. Price 8/6.

of international law, and not infrequently puts the cart before the horse in regarding the "Rule of Law at Sea" as the dominating force, instead of the British Navy; moreover, he alludes to this "Rule of Law" as if it was a clearly defined code capable of exact interpretation and unquestioningly accepted by every civilised nation. This, as we know is, in practice, very far from being the case, especially in time of war.

Mr. Bowles condemns rigorously both the Declaration of Paris, of 1856, and the still-born Declaration of London, of 1909, as two great betrayals of our sea rights, due to the mischievous activities of the Foreign Office. His plain statement of facts and the bitter lessons of the late war leave no room for doubt that he is right in his conclusions, but both these documents allude to the uncertainty of the law and the divergence in the methods by which nations seek to apply it. Still more is this the condition of affairs to-day, when the Powers are so busy with the "pacts and agreements" of a League of Nations, that they are loath even to discuss the state of chaos in which the Great War left this "Rule of Law at Sea."

The prolongation of the last war the author attributes directly to the interference of the Foreign Office with the normal course of international law as expounded by the Prize Courts. However this may be, there can be no question that huge supplies of vital commodities did reach the enemy during the first years of hostilities. "Fed and nourished, clothed and armed as she now was by continuous supplies from oversea, made available to her through Scandinavia, by means of English coal, largely by English merchants, and all under the protection of Foreign Office licences issued secretly, in contempt of Courts, and without regard to law, Germany was now able to affront, and did in fact for years affront, a prolonged struggle with the whole world," he writes.

Just over three years ago, Rear Admiral Consett published that striking book *The Triumph of Unarmed Forces*, which gave a mass of official figures, showing the extent to which the self-imposed restrictions on our sea power aided and abetted the enemy. These two books supplement each other and form a scathing indictment of a system which could never have come about had there been a fully trained and organized Naval Staff and a virile Committee of Imperial Defence.

The fact was that those who should have inspired the whole policy of our sea warfare—the Board of Admiralty—had no cut and dried plan for preventing the sinews of war reaching the enemy through neutral countries; they planned to waylay shipping, but left to others the policy governing the control of the cargoes.

Instead of the whole business being treated as an operation of war, to be controlled by a fighting Ministry, it fell into the hands of a department inherently incapable of dealing with it. "The business of the Foreign Office is not to wage wars but rather, and at almost any cost, to seek Peace and ensure it. . . . the spectacle of a Foreign Office,

attempting to control a war, is as strange as would be that of an Admiralty or an Army Council attempting to draft treaties," is the way the author expresses it. He goes on to show how it became necessary for the Foreign Office to call in "practical sea-traders; by whose advice, in fact, it remained continually ruled throughout. The whole sea-movement and commercial life of the world were thus placed at the mercy of a single English Department of State, and made to depend on arbitrary licences, issued in its name by a body of English traders."

"It is the nature of traders to desire to trade," he adds laconically.

Like Admiral Consett, he explodes the myth that by turning off the taps of excessive supplies to Scandinavian countries we should have fallen foul of the United States. "By what precise means it would, in any case, have been possible for the United States to render active belligerent assistance to the Germanic Block, so long as an undefeated English Fleet remained in being is a metaphysical speculation . . . nor is it easier to understand upon what ground an American merchant, temporarily debarred by due process of law from entering into one important European market, should, on that account, desire to deprive himself also of every other" are his pertinent remarks.

If, in surveying the past, Mr. Bowles shows us our many fatal mistakes, he also leaves us with very definite warnings for the future.

By the full use of sea power (by invoking the rule of law at sea, he would describe it) we can, as the author clearly shows, exert such influence on a continental enemy that he *must*, ere long, sue for peace, whether he be at war with ourselves alone or with a Continental ally, such as we had in the late war. Whatever obligations have been laid on us by alliances, the fact remains that military adventures on a grand scale in Europe are not and never have been in the interests of this country.

The Declarations of Paris and London marked a phase in our history when we abrogated something of our sea rights and our sea power in favour of continental entanglements. In July, 1916, we cast off those fetters by a renunciation which the Foreign Office nervously explained to all neutrals. Now, in recent years, attempts have again been made to enmesh us in the military tangles of Europe in the abortive "Draft Treaty of Mutual Assistance," and "Geneva Protocol of 1924," while we are actually committed by the much vaunted Locarno Treaty to render active assistance to either France, Germany, Belgium or Italy if any one of them is attacked.

To-day a disarmament conference at Geneva is in course of preparation. There is grave danger that this may involve a further weakening of our sea power, further military entanglements to provide "security" against a continental quarrel; and therefore, the lessening of our own security and of our influence to preserve peace.

The author urges that England should "intimate to the several Governments of Europe that they must never again expect her, in any circumstances whatever, to land upon the Continent an army of the kind and upon the scale of her armies in the recent war; but that she will undertake instead, in every case of a forcible breach of treaty there, to lay behind her allies in its defence the whole lawful economic resources of the earth, and to close those resources, so far as the Law of Nations and her own naval capacity together permit, to the forces and peoples of the aggressors."

The danger of this policy is that it commits us to using our Fleet at the dictates of those foreign representatives who are to designate "the aggressor." Shall we not do far better to cut adrift from continental entanglements and resume an independent attitude which will enable us to act according to our own time-honoured sense of British fair play and justice, is the question which the reader will probably ask himself ere he closes this book.

In any case he will not quarrel with the final paragraph of a most able and deeply interesting work :—

"In the English Navy and Merchant Service, and in the power of England to command the surface of the roads of the world under the control, not of her own Executive, but of undisputed, general Law, lies the sole hope of peace in the future for a saddened and distracted world. It was due, as it has been shown, to England's determined mishandling of her command of the roads from 1914 to 1917, that she and Europe together are enduring their present miseries. The responsibility upon her, therefore, with regard to the present state of the world is great. Great indeed, also, are her trust and responsibility for the future. She cannot share that responsibility with any other nation or League of Nations. The responsibility for the decision must rest at last with her alone."

THE INTERNATIONAL SITUATION

THE LIMITATION OF ARMAMENTS

SHARP divergences of opinion continue to be manifested at Geneva between the delegations representing the chief Powers in the preliminary discussions on limitation of armaments. There appears to be little likelihood of the Preparatory Commission reaching an agreement which would enable a formal Disarmament Conference to be called before our next year's Service Estimates have been presented to Parliament.

Difficulties have been encountered from the outset in coming even to the semblance of any agreement, the first task of the experts being the solution of such general questions as the following:—

1. What is to be understood by "Armaments"?
2. (a) Is it possible to limit the potential armaments of a State or should the limiting measures be applicable only to armaments maintained in time of peace?
(b) What is to be understood by "diminution" or "limitation" of such armaments?
3. (a) According to what principles is it possible to compare the armaments of one State with those of another?
(b) What are the possible methods open to employment for a limitation of armaments?

The attitude of the various governments towards the general question, as expounded by their political representatives, was outlined in the August JOURNAL.¹ Further expressions of opinion, illustrating the contrasting views are as follows:—

BRITISH EMPIRE (Viscount Cecil).—The thing that really determines the armament of the different countries is the limitable armament of their neighbours. It is almost impossible to consider the ultimate strength of the assailing country because it cannot be increased any more than it can be diminished. The main thing to be considered is the armaments which can be made effective for immediate invasion by their neighbours and consequently have to be dealt with by a preparation of similar military and naval armaments to resist attack.

¹Page 589, *et seq.*

The three arms really present different considerations.

Naval force is a comparatively simple matter to estimate ; if you limit the ships and the guns you really limit the strength of a navy completely.

When you come to limit an army you are in a much more difficult position, because, evidently, you have to limit both the actual number of men and the weapons they use. You have also to consider the question of mobilisation.

With regard to the limitation of air armaments, you are in a still greater difficulty, because commercial aeroplanes can be changed in a night into military aeroplanes.

At a later stage Viscount Cecil remarked that, in certain respects, there was evidently a much more important difference of opinion than he imagined. He did not agree with M. Paul Boncour's views, that it was possible to make a distinction between defensive and offensive armaments. He had never heard of a defensive warship and would be reluctant to say that any submarine could be classed as such. He could not conceive such a thing as a defensive army. If you are going to consider what is to be disarmament, surely you must consider all armaments which could be used for offensive purposes.

FRANCE (M. Paul Boncour).—There should be limitation by agreement of all armaments of an offensive character, but countries should be left free with regard to defensive armaments. Only thus can they ensure security.

Arbitration, security and disarmament must go together. There should be no further question of war between one State and another, but only between the League of Nations and a State guilty of aggression.

The League must not merely give moral support, which may be of very little practical help. The attacked State should know that the League will help her with all the means in their power : military, naval, economic and so forth.

The definition of the aggressor should not be left to slow procedure. The attacked State must be able to reckon on speedy and effective assistance.

POLAND.—The Council should be able to take a decision with regard to the aggressor as speedily as possible and be able to make the Covenant of the League effectively respected.

At present, the regulations of the Council do not provide for a procedure which would be sufficiently speedy.

SPAIN (M. Cobian).—A mine-field at sea and submarines with only a limited radius of action and unsupported by cruisers are armaments of a purely defensive character.

SWEDEN (Mr. Hennings).—From a purely military and technical point of view armaments as a whole cannot be classified as offensive or defensive, but from a political point of view it is possible, though difficult, to classify certain armaments as purely defensive.

BELGIUM (M. de Brouckere).—Governments are likely to dispute the sufficiency of the military strength allotted them by the League. What arguments are to be used to convince them?

Every country must be left such national armaments as are consistent with its safety, having regard to the possibility of attack and the possibility of assistance being forthcoming.

FINLAND (M. Erich).—It is most important that countries exposed to external aggression should be able to count on immediate financial and economic, as well as military, naval and air support, in emergency, especially if they have reduced their own armaments.

Some countries which have only been sovereign States for a short time have not yet been able to develop their armaments sufficiently to ensure national security.

UNITED STATES (Mr. Gibson).—In view of the fact that the United States is not a member of the League of Nations, their Government would necessarily abstain from participation in submitting any report to the Council of the League. All reports of the Preparatory Commission would, however, be transmitted to Washington.

It is very difficult if not impossible to say whether a given armament is *per se* offensive or defensive. From a technical point of view the terms offensive and defensive refer to the use or disposition of armaments rather than to the armaments themselves.

It is a generally accepted principle that a vigorous offensive is often the best defence.

A possible exception is to be found in certain classes of fortifications which, owing to their location are essentially for defence and not for offence.

Many of the factors involved are different in different regions of the world: security must be given a different evaluation for a group of European countries than for a group of countries in the Western Hemisphere. In consequence, the limitation of land and air armaments in one or more countries of the Western Hemisphere can have little or no effect on such a question arising in one or more countries in Europe. In its practical aspects the question is largely regional in character and a practicable solution will have to be sought on a regional rather than on a universal basis.

ARGENTINE (M. Perez) supported the views of the United States delegate.

NAVAL, MILITARY AND AIR SUB-COMMITTEE.

On the more technical side of the question of limitation of armaments, opinions seem to have ranged themselves into two main groups, one representative of the Continental Powers: France, Belgium, Italy, Poland, Roumania, Serbia and Czecho-Slovakia; the other of the great Sea Powers and the nations of the Western Hemisphere: Great Britain, United States, Japan, Argentine, Brazil and Chile.

These groups are not unanimous within themselves, individual representatives sometimes abstaining from voting, but, broadly speaking, they express conflicting outlook on the following matters of principle:—

Army, Navy and Air Forces.—The Continental Group secured a majority vote that any rule adopted with reference to disarmament should be applied to the three forces as a whole and that they should not be considered separately, as was advocated by the rival Groups.

Organized or Potential Resources.—The Continental Group also secured the recommendation of the Sub-Committee that disarmament should be applied to all the resources of a nation and not only to the organized forces and their material.

The impracticability of this proposal has been repeatedly pointed out by British, American and other representatives.

Naval Standards of Comparison.—The Continental Group desire the standard of naval strength to be "Total Tonnage." The three principal sea Powers, supported by Argentine and Chile advocate comparison by "Tonnage of Classes of Ships."

Admiral Jones, U.S.N., has proposed that comparison should be made of:—

- Total tonnage of capital ships;
- Total tonnage of aircraft carriers;
- Total tonnage of cruisers and destroyers;
- Total tonnage of under-surface ships.

He also proposes that consideration should be given to the ages of the individual units.

The American representatives wish to work on the principles of the Washington Treaty and in this Great Britain supports them. The proposal to legislate on the principle of "Total Tonnage" is, of course, not in conformity with the existing agreements between the Sea Powers.

Military Standards of Comparison.—The Military Committee adopted the following resolution:—

"It seems very difficult, if not impossible, to compare forces so dissimilar as a professional army, on the one hand, and a conscript army on the other; or, again, an army concentrated in one

[continuous Continental territory, well supplied by rapid means of communication, with an army distributed throughout home and colonial territories, whose communications are more or less precarious."

Nevertheless, the Committee considered that the following standards of comparison may be taken into consideration :—

- (1) Number of peace-time effectives ;
- (2) Organization of peace-time effectives ;
- (3) Period of service and degree of training.

There appears to be a disposition on the part of the Continental Group to include in the assessment of a nation's military strength not only reserves but also police forces.

Air Standards of Comparison.—At first a simple arrangement for computing national strength in the air was agreed to by which military (including naval) aircraft would be compared as follows :—

- | | |
|--------------|-------------------------|
| Aeroplanes : | (1) Total horse-power ; |
| | (2) Numbers. |
| Dirigibles : | (1) Total volume ; |
| | (2) Number ; and |
| | (3) Total horse-power. |

Subsequently the Continental Group re-opened the subject and by 12 votes to 5 carried their contention that non-military aircraft should also be included.

League Supervision of Armaments.—The United States delegates evinced the strongest resistance to any idea of inspection of the armaments or industries of their country by any international body, a course which seems to have been advocated by France and her supporters.

General Shiiden, the Japanese Military representative, agreed with the American view, and said his government had national defence secrets of which its own people, and even its own army, were in ignorance.

Chemical Warfare.—The conclusion was reached that factories normally and legitimately employed for chemical purposes, including dyeworks, could be quickly adapted to manufacture poison gases. Within a few days such factories could be converted to produce a small output, but production on a larger scale would take time as additional plant would be required.

It was considered that it would be difficult to find a means of preventing these factories from being used for the production of poisonous gases, because they were consistently engaged in research work, which accidentally led to the discovery of gases which might be used in war.

The fact has been noted that although both the Washington Treaty and the Traffic-in-Arms Convention condemn the use of asphyxiating gases, activity in their production has continued to be very general.

SPANISH MILITARY AFFAIRS

By W. HORSFALL CARTER, B.A.

(Travelling Fellow, Queen's College, Oxford).

IT is the fashion to decry the various military dictatorships which have been set up in Europe since the war, not so much on account of the concentration of power in the hands of one man, or of one small group, as because that man or that group stands at the head of the military organization of a state and is therefore inevitably regarded as *reactionary*. Admittedly, it is not difficult to show that in some cases, as for example in Hungary, the army constitutes an essential part of the dictatorship, and, although the forms of parliamentary government may have been preserved, there exists a strong tendency for the whole nation to be systematically militarised. Yet it is a mistake to judge and condemn military rule even in those countries without due discrimination and some regard for history.

A comparison of recent developments in Greece and in Spain is significant. In both countries one of the principal justifications for the seizure of power by military leaders may be found in the state of apathy into which the nation had been plunged by continual parliamentary intrigues and by a frequent alternation of weak governments. But whereas in Greece this political indifference, as might be expected, was of a transient character and has now given place to a public demand for the removal of military influence from politics, in Spain the political apathy is constant, and it is the Military Directory itself which has made praiseworthy efforts to dispel this general listlessness, while addressing itself to the task of weaning the Army from politics. Incidentally, it is now clear that, in Greece, General Pangalos was never really popular with the mass of the army and that he was simply the stalking-horse of a small clique. In Spain, on the other hand, General Primo de Rivera, has never lost his personal popularity with the Army, whilst he is generally respected and admired for the great services he has rendered to his country in his dual capacity of head of the army and head of the state. It cannot be too often repeated that the Marquis de Estella has no personal political ambitions and that he may be regarded as quite prepared to vacate his position as Prime Minister, as soon as he may consider his work for Spain as finished.

From the outset, General Primo de Rivera described his government as an experimental dictatorship and at once intimated that the restoration

of normal constitutional conditions would be only a question of time. After three years of personal rule, with the Military Directory giving place last December to a Civil and Economic Dictatorship, he has instituted a form of plebiscite, the response to which should be evidence that the country as a whole has faith in its leader's promise to convoke a national assembly and to return by this road to some form of representative government and a modified Parliamentary existence.

To understand the state of affairs subsisting in modern Spain, it must be remembered that there exist three basic factors, the sum of which offers the clue to any understanding of the development of affairs since 1875, that is, the year of the Restoration. Of almost equal importance are the first factor, namely, the national tradition of loyalty to the person of the Sovereign—a sentiment which we in England can fully appreciate—and the second factor, which is the power and prestige of the Army. No comprehension of these Spanish problems is possible without the realization that the Spanish military caste represents the strongest organization in the State, and further that this caste is permeated with traditions of discipline and loyalty to the Throne which have to be reckoned with in any scheme of internal reform. The third and last factor, to which allusion has already been made, is the prevailing apathy and lack of political sense which has been the perpetual hall-mark of the Spanish nation.

The so-called "national episodes" of the XIXth century throw into vivid relief the part played by the monarchy in the present destinies of Spain. Whenever confidence in the royal family abates, the nation is a prey to civil strife and all progress comes to a standstill. If, sometimes, the King seems to favour reaction and to turn his back on those who would seek to bring Spain into line with the other European States, he is, in fact, only following Spanish tradition and holding up the mirror to his own country. So, in those fateful days of September, 1923, King Alfonso, fortunately for Spain, compromised with the authors of the *coup d'état* and accepted the consequences of the breach with constitutionalism to the detriment of his own personal prestige, but in the wider interest of national unity.

The present constitution of Spain, that is, the Liberal constitution of 1876, had been won after a hard struggle, in which the then Prime Minister, Don Antonio Canovas del Castillo, a moderate Conservative, successfully resisted the reactionary elements who clamoured for a return to the Catholic Unity of the 1845 Constitution. His first care was to oust the military leaders from the control of public affairs. This action proved to be a common bond among all politically-minded Spaniards, which led to the party truce concluded at Alfonso XII's deathbed.

It was to be expected, however, that, during the whole period 1875-1923, the Army, shorn of its political responsibilities, should still contrive to assert and to consolidate its power. Accordingly, the Army

thought it saw its opportunity in Morocco in 1909. No one in Spain, outside Army circles, had any enthusiasm for that protracted and essentially fruitless campaign, which is now estimated to have cost the country some 40,000 lives and more than 500 million pesetas. Moreover, on the one hand, the actions and reactions within Army circles have proved Spain's undoing as a military power, while, on the other hand, the drain of man-power to swell the ranks of the barely-educated corps of officers could only exert a disastrous effect on the march of events in internal politics. Military *Juntas de Defensa*, originally formed for the formulation of legitimate grievances of a professional nature, encroached more and more upon the sphere of politics until Señor Maura at last voiced the general feeling of clear-minded men with his famous remark "Let those govern who impede government." This admission of failure thus prepared the way for the advent of General Primo de Rivera, Admiral Magaz and the other distinguished military leaders who came to form the Directory.

From the first it was known that General Primo himself was against all further adventure in Morocco; it was, therefore, the object of his government to strengthen and define the political action of his predecessors and to reduce to the utmost any further inevitable sacrifice of men and money. There is scarcely any need to show how the Directory has carried out this policy, firstly, by withdrawing the Spanish troops to fortified lines, disarming the tribes in the rear of these lines and adopting the more liberal "Protectorate Policy"; finally by agreement and military co-operation with France. This attitude has culminated in the surrender of Abd-el-Krim at Targuist last May.

But, in addition to that policy, the Marquis de Estella insisted upon a far higher standard of military discipline and upon a change of methods in the treatment of the natives. All the latest reports go to show that the situation in Morocco has greatly changed, that the evil traditions of the past have been definitely abandoned and that a new era may have opened for Spain in Africa.

So much has General Primo accomplished that one can but sympathize with his anxiety to consolidate this achievement by obtaining complete control of Tangier, even though his Government's manner of presenting the Spanish claim to the world may have left a great deal to be desired.

Looking to the future, two things seem quite plain, firstly that until the Moroccan question has been reduced to its right proportions as a factor—albeit a decisive one—in the whole problem of the Mediterranean balance of power, the energies of this or any other government in Spain could not be properly bestowed upon the pressing civil and economic obligations. Secondly, that only a professional soldier like General Primo de Rivera, who is personally popular with the Army could hope to put an end to that rotteness within Army circles which was reflected throughout the earlier conduct of operations in Morocco, and, at the same

time, contrive to put an end to military interference in politics, as instanced by the formation of the *Juntas*.

The restoration of military efficiency in Morocco was indeed only one aspect of the Army problem with which General Primo de Rivera was faced. The degree to which he has succeeded, in the teeth of considerable difficulties, in dissociating military from political questions was well illustrated by the recent episode of the artillery rebellion. In the words of the Spanish Chargé d'Affaires in London: "The past crisis in Spain was not a military revolution nor yet a political one, but only insubordination in one section of the Army in defence of ideas which are in opposition to all constitutional dictates . . . Public opinion has shown itself entirely on the side of the Government in its bold and energetic attitude towards a problem which for fifty years had been disturbing legal order in the country."

The story goes back to the days when, owing to the troubles of the Royal family, power was constantly left in the hands of this or that military leader; consequently, all manner of favouritism was rife. To obviate this circumstance, the two most highly-reputed corps of the Spanish Army, the artillery and the engineers, instituted a rule of promotion based strictly on seniority—a rule which every newly-joined officer on obtaining his commission always swore to observe. When General Primo de Rivera first came into power, he received a deputation from these Corps, and was induced to declare that he would not alter their cherished system. He knew, however, from experience that not a little of the disintegration within the Army Command in Morocco had been directly due to this hard-and-fast method of promotion; for it was bound to encourage a tendency among the younger officers to disregard the orders of the "old men" at the head of the Army, and to act according to their own lights. The consequences of chronic breaches of discipline were reflected in the Moroccan disasters of 1921. After prolonged hesitation, in June, 1926, in the interests of efficiency, General Primo de Rivera, after trying every sort of compromise with the chiefs of the Artillery Corps, felt himself constrained to ask King Alfonso to sign a decree introducing a system of promotion by selection and merit on the lines of that prevailing in the other sections of His Majesty's forces. The enemies of General Primo de Rivera would assert that "merit" could only come to mean simply devotion to the person of the dictator, but to the more impartial foreigner this somewhat specious argument hardly seems to balance the obvious advantages of the new decree. At any rate, it may be conjectured that the appointment of General Berenguer to a post of confidence in the Royal Household was deliberately intended to show that personal animosity would not stand in the way of merit. It is evident from every point of view, that the new decree was in the interests of the Artillery officers themselves, and that only a misguided sense of loyalty had hitherto impelled them one and all to cling firmly to the tradition of the "*scala cerrada*."

The crisis then resolved itself into a compromise which could scarcely be expected to last. General Primo, having his hands full at the moment, did not venture to drive the matter much further. The compromise, or truce as it might more accurately be termed, only lasted until the early days of September.

At length the smouldering fires of resentment burst out into open rebellion, and went so far that the rank-and-file of the whole corps of Artillery was drawn into the dispute although the majority was quite indifferent to the issues raised. It was only the combination of the King's tact and of General Primo's firmness that saved the situation and ensured the complete collapse of the rebellion. By his forbearance in the hour of triumph the Prime Minister has enhanced his prestige still further with the Army, while his evident success in keeping military and political questions strictly apart justifies the hope that before long he may safely leave the control of public affairs to a purely civil government, confining his personal activity to the War Office.

The unknown factor in the situation remains the strength and sense of public duty of the *Unión Patriótica*—the "National League" of Spain, which must form the nucleus of such backing as the future Government will be able to rely upon in the country. It is too much to expect that the evils of inertia and corruption which have for centuries characterized Spanish politics will disappear by the magic of Directory rule. Consequently, the difficulties of giving Spain that sound internal constitution which is her crying need are not to be minimised.

One of the most penetrating writers of modern Spain, Señor José Ortega y Gasset, has put down the continual political misfortune of his country to the fact that the average Spaniard—who is, in the long run, responsible for the politics of his country—has never, in any sphere, really accepted not merely the possibility but still less the necessity of any fundamental reforms. Certainly the mass of the people is out of sympathy with reforming zeal and will instinctively cleave to a sorry tradition rather than follow in the wake of those who point to the future and in the direction of improvement. Señor Ortega y Gasset defines this attitude of mind as that of the "*petit bourgeois*" and explains the apathy of his fellow-countrymen as the inevitable result of the domination of the "*petit bourgeois*" spirit. For, as he says, in Spain there is no genuine ruling class, no aristocracy which is in any way politically active, no "*intelligentsia*" possessed of driving force, and incidentally no agonizing labour problem such as might stimulate national energies and dissipate somewhat the prevailing lethargy. It is precisely because General Primo de Rivera's Government has taken definite steps to try and cultivate a civic sense in the hopelessly unpolitical Spaniard that he has earned the approval of those who foresee a better political future for Spain.

There may be two opinions as to the wisdom of the prolonged muzzling of the Press in a country where such a safety-valve and instru-

ment of public opinion is of vital importance, but there is no denying the present Government's endeavours to effect a transformation of internal conditions by interesting more and more Spaniards in the conduct of the national life. This is the sense and purpose of the extensive plan of administrative decentralization and municipal Home Rule which is embodied in the Municipal Statute of 8th March, 1924, and the Provincial (or inter-municipal) Statute of 20th March, 1925. The effect of these reforms is to encourage and turn to account those living forces of local patriotism which impress even the casual visitor to the Peninsula, but which have never yet been utilized in this way as a political asset. The special Spanish number of *The Times* came as an opportune reminder that Spain has made great strides of recent years, and that local problems are nowadays being tackled and solved all over the country without political complications, while large sections of the public who had hitherto held aloof are awakening to an interest in civic affairs.

This school of practical politics is only a beginning, it must be followed up and supplemented by free and open discussion of the national problems, and above all by a continual process of educational reform along the lines marked out by Don Francisco Giner de los Rios and his disciples connected with the *Institución libre de enseñanza* in Madrid. Inevitably, a system of teaching which clings to mediæval habits and precepts reacts upon the individual and induces a narrowing of the mental horizon. In Spain this is combined with a pronounced professional, and therefore, limited, outlook, the evil consequences of which are writ large upon the features of the national life. There will be no lasting political transformation until and unless educational reform has, by cultivating popular initiative, dispelled once and for all the inveterate apathy and indifference to national backwardness in political and social life. Until then it is difficult to see how the hitherto preponderating military influence can ever be kept within its true sphere of activity without risk of its encroaching upon civil affairs.

In conclusion, allusion should be made to the Spanish Government's so-called "dignified withdrawal" from the League of Nations. In connection with this short-sighted act the Spanish and foreign Press has printed a communication said to have been sent to the Council of the League and to several of the Powers by a group which claims to speak for "The New Spain." This manifesto first repudiates the action of the present Government, and then proceeds to suggest not only that General Primo de Rivera may shortly find himself in insuperable difficulties at home, but also that the King's position is irremediably compromised. The value of this document may be gauged by the fact that it bears the signature of Señor Blasco Ibañez and his fellow-Republicans in Paris. The propaganda of this group was definitely discredited, at least in Spain, at the time of the publication of that author's booklet, "King Alfonso XIII Unmasked, or The Militarist Terror in Spain," which was translated into English in January, 1925. These are but the remote and misleading

ideas of certain political exiles. Those who speculate on the establishment of a Republic in Spain are shutting their eyes to centuries of tradition, while they are losing sight of the peculiar stability of the Spanish social order as well as of many other features of the national character. Foreigners can find it difficult to conceive, that in these days of social upheaval, there should still exist a State in which the social foundations are as firm and stable as the political bases are rocky and insecure.

TANGIER

By C. D. BOOTH.

TANGIER, standing at the extreme north-western point of the African continent, within thirty-five miles of Gibraltar, has been in the past and is long likely to remain a centre of international interest, the fate of which is intimately connected with the Mediterranean policy of at least four great European Powers. For this reason, the port, the town, and its surrounding zone of some two hundred square miles, have an importance exceeding that of all other places in the Cherifian Empire of Morocco.

Since history began Tangier had been occupied, in turn, by the Phœnicians, the Romans and the Vandals. The Arabs in their triumphal westward march, in the early years of the eighth century, used it as a point of departure from which to carry the banner of Islam into Spain. In 1471, the Portuguese, profiting by divisions among the rival claimants for sovereignty of the Mauretanian Empire, wrested Arzila and Tangier from the King of Fez, retaining the latter place until it was presented as a wedding gift to Charles II of England, on the occasion of his marriage to Catherine of Braganza in 1661.

The British built a fine harbour, and fortified the neighbouring hills hoping to raise Tangier to the status of an important centre for North African trade, in addition to making it a base for naval operations at the gateway of the Mediterranean. But civil strife at home and the continual attacks of the tribesmen so depleted the King's exchequer that in 1683 it was decided to evacuate the town. The fine breakwater was demolished, the forts were disbanded, and by 8th January, 1684, the last British ship sailed away. From that day to this Tangier has been an integral part of the Cherifian Empire, in name, if not entirely in fact.

Of the various races which have occupied it there remain in the buildings but few traces. The wall of the Moorish town has in it, here and there, a Roman brick. The ruins of the English forts are covered by the drifting sands. A new breakwater is now being built upon what remains of the British mole. At Tangier Balia, a mile to the East, lie the crumbling remnants of a once strong Portuguese fort, which, rumour says, was constructed upon the site of the Phœnician town.

Modern Tangier, a city of sixty thousand souls, is a curious mixture of East and West, of European and Asiatic, with a wholesome sprinkling of indigenous Berber elements from the Rifi hills. The native town within the walls contains the Arab and Jewish residential quarter as well as the greater part of the business establishments. Through the old town from the sea to the outer market, runs the Siagheen or Street of the Goldsmiths. Outside the walls is the Great Socco, a market for the produce of the whole zone, and half of the Angera territory which lies within the Spanish Protectorate between Tangier and Ceuta. To the west of the town is the plateau of the Marshan, and still further west is the Jibel K'bir upon the slopes of which lives a large proportion of the British Colony.

With the possible exception of Constantinople, the population of Tangier is more mixed than that of any town of its size in the world. Of Europeans there are, 8,000 Spanish, 1,200 French, 700 British, and small colonies of Italians, Belgians, Portuguese, Dutch, Scandinavians, Russians and Turks.

Not the least interesting feature of Tangier is the nature of its government. When, in 1904, France and Spain, secretly, with the connivance of Great Britain, arranged to divide the Moroccan Empire between them in the interests of peace, as well as for the good of its inhabitants, the question of the status of Tangier came to the fore. On account of its strategic position, Great Britain insisted upon its remaining unfortified and permanently neutral. As a part of the French or Spanish spheres of influence, it might easily have become a threat to British supremacy in the Straits of Gibraltar; so it was finally agreed that the town should remain a part of the Cherifian Empire, and that its neutrality would be guaranteed by the parties to the secret arrangement. In 1912, when the French and Spanish definitely undertook the protection of all Morocco, it was agreed that Tangier be given a special form of administration, the nature of which was to be decided at a later date. From that year until 1925, the town and its zone were administered, in so far as European interests were concerned, by the Diplomatic Corps of all the nations represented. The native population, Mohammedan and Israelite was governed by a delegate of the Sultan called the Naib. In accordance with a previous treaty all Europeans and citizens of the United States resident in Tangier, enjoyed extra-territorial rights. That is to say, that they were in no respect subject to the Moroccan codes, but were answerable directly to their own Consular Courts. Under this system, which, except in the matter of tax collection, worked very well, the mixed races lived together in comparative harmony.

The Great War came and with it disturbance to Tangier. The Sultan, now an ally of France, drove out the German colony without protest by any of the other Powers. That German nationals were allowed to remain in Spanish Morocco, less than twenty miles distant,

may be explained by stating that in their zone of influence the Spaniards ignored the Sultan's decree. In effect the Cherifian Empire was, therefore, divided into two countries, the one including Tangier and the French Zone belligerent and allied to the French, the other neutral with a leaning toward the German cause. During the War, and for some five years after it, the Powers had no opportunity to meet for the purpose of giving effect to the resolutions contained in the treaty of 1912.

After some preliminary conversations, a conference was held in the latter months of 1923, at which Great Britain, France and Spain were represented. Out of the deliberations of that conference came a convention popularly known as the "Statute of Tangier." At the time of the drafting of the convention it was assumed by the three responsible Powers that they could count upon the acquiescence of all the other Powers signatory to the Act of Algeciras. The Italian Government had expressed a desire to take part in the conference, but its request was refused.

The Convention, although signed in December of 1923, was not officially brought into force until June 1st, 1925, the intervening years having been used in vain attempts to persuade Italy and the United States, whose refusal to be a party to the Statute became the cause of some embarrassment.

Under the new Constitution, Tangier and its Zone remained a part of the Moroccan Empire, the *Statut Territorial* being vested in the Sultan and the *Statut Personnel* being divided between his delegate, the Mendoub, who has complete control of native affairs, and the Mixed Administration who are charged with the responsibility of governing such European nationals as come within its jurisdiction. By this arrangement there was created a dual administration, that of the natives being controlled from Rabat, and therefore, although nominally native, actually French, functioning by the side of the International Administration which is entirely European.

The Moors and Jews have their Islamic and Rabbinic Courts, which administer the old Moroccan law. The international civil and criminal codes are administered in a Mixed Tribunal upon which sit British, French and Spanish judges. The Public Works and Department of Hygiene are in charge of Spanish officials. The Police is in charge of a Frenchman, and the Department of Finance is controlled by an Englishman. The executive responsibility lies in the hands of a French Chief Administrator.

There is an International Legislative Assembly charged with local legislation. This body is composed of members chosen from each of the nations signatory to the Convention of 1923 in proportions fixed by the Statute. Its total membership including natives is twenty-six. The members of the Legislative Assembly are not elected by free vote of their fellow nationals, but are chosen by the Consular representatives. This

method of appointment is said to assure a perfect expression of the will of each Colony, yet, at the same time, to insure against the possibility of electing a member whose views would not be suitable to those of his own Foreign Office.

Over the Legislative Assembly is the Committee of Control made up of the Consuls-General of all Powers adherent to the Convention. This Committee is responsible for the upholding of the Statute. It confirms all new legislation and enforces observance of the Convention.

Within a month of the solemn inauguration of the new Statute, it became evident that there were serious flaws in its provisions. The new taxes, although not heavy, were objected to by a population unaccustomed to the payment of any direct impost. The American and Italian nationals resident in the town could not be forced to comply with the laws and retained all the advantages of their extra-territorial rights. The Spanish colony, considerably larger in numbers than the French, but with the same number of representatives on the Legislative Assembly began to protest against what they regarded as the unfairness of that body, which, it must be said, seemed to be unduly influenced by the French Administrator, who was an employee and not a member thereof.

Gambling which was strictly forbidden by the new code, flourished under Italian proprietorship of various establishments of the lower class, whilst the Spanish owners of larger and more respectable casinos were obliged to close their doors.

On 2nd July, 1925, the discontent came to a head in the form of a general strike of all factories and business houses. The French firms, at the instructions of their Consular authorities, attempted to remain open, and a small riot developed in which some French property was destroyed. Fortunately the native population remained quiet, and the incident trailed off into a series of newspaper polemics between the French and Spanish newspapers.

A few months passed, and the Spanish Protectorate Government, it is believed at the instigation of Madrid, erected a customs barrier around the International Zone, which forced the payment of a double duty on imported products such as tea, sugar and candles, the staple provisions of every native in Morocco. This act was made possible by the faulty wording of a clause in the Statute, and, for a time, no amount of argument by the Legislative Assembly could prevail upon the Spaniards to consider the spirit rather than the letter of the Convention. When this was finally settled, after the trade of the town had been seriously damaged, other causes for discontent arose.

Under the new regime, the two International *Tabors* (military police), one commanded by a Spaniard and the other by a Frenchman, were to be disbanded and a new Gendarmerie created to police the Zone. This unit was to be commanded by a Belgian officer. He arrived to take

over his duties but neither Tabor was disbanded; this step would obviously sacrifice the valuable asset of the possession of an armed force in the Zone. Nor, in the circumstances, did the Committee of Control consider it politic to enforce the Statute in this respect.

Then came the end of the Rifi war, followed by a campaign, stage-managed—so it was alleged—from the Peninsula, directed toward securing for Spain the inclusion of Tangier within the Spanish Protectorate. This campaign reached an acute stage in Tangier some weeks before General Primo de Rivera made his formal request to the Powers. Local dissatisfaction among the labouring classes with the existing Government, skilfully encouraged by propaganda against the Administration, brought about further one-day strikes. A genuine feeling that the Spanish population should be granted, in the Administration, an increase of influence, commensurate with their preponderance in numbers, began to spread among other colonies. The local French authorities opposed this claim, and the acts of the French Administrator were calculated to leave little doubt in the minds of the citizens that he intended to ride the whirlwind.

In the meantime, the town was suffering from a serious depression in trade and a scarcity of tourists. The fall in value of the French franc, to which the Moroccan franc is by law indissolubly connected, brought about what nearly amounted to a financial panic. The ten years' arrears of *Taxe Urbaine*, collected by the British Financial Administrator—in francs—and held in that currency according to the statutory provisions, began to depreciate in value at an alarming rate. The Financial Administrator, with the concurrence of the Spanish, recommended the conversion of the reserve into gold or into some stable currency. His recommendation was opposed and stultified by the action of the French members of the Finance Committee, and the citizens witnessed the depressing spectacle of a loss of some £20,000 sterling of moneys already allocated to much-needed municipal purposes.

Whilst all this was going on, a serious scandal in the French commanded municipal mixed police was exposed. It was found that minor officials of this body, charged with the duty of arresting accused and suspected persons, both European and native, had exceeded their duties in respect of many Moorish prisoners. Instead of handing them over to the Islamic Courts for trial as provided by law, they had been detaining natives in the European Commissariats and by methods scarcely less barbarous or cruel than those practised in so-called uncivilized countries, had extracted confessions of guilt before sending them to the Cherifian Courts. Firm action by His Majesty's Consul-General, and considerable publicity in the Press put an end to the abuses, which were not confined to the French officers of the police, but the affair left an unpleasant flavour among the French population, who considered that there was a local Hispano-British combination endeavouring to discredit their administration.

Summarizing the history of Tangier since the inauguration of the new Constitution fifteen months ago, it cannot be said that its framers have altogether succeeded in their work. Nor on the other hand, can it be contended that it is a total failure. The broad principles of international government for this community would seem to be vindicated both by local and by European considerations. The errors in drafting the constitution are serious, but there are not many of them, and all are such as can be corrected. In spite of disturbances certain departments of the administration have functioned normally, and the results of their work have been of benefit to the community. Good roads have been constructed. The town is much cleaner. The international Mixed Tribunals have made the administration of justice more rapid and more certain than ever it was in the Consular Courts. The collection of taxes, and the disbursement of public funds is regular and free from corruption. The work on the new Port is progressing, and that section of the Tangier-Fez railway which lies within the confines of the International Zone is completed.

But in spite of all these benefits, and with the full knowledge that such abuses which arise out of faulty clauses in the constitution can, and will, in the fullness of time be corrected, the situation in Tangier is by no means improving. America and Italy remain outside the jurisdiction of the administration. The recent request of General Primo de Rivera for the inclusion of Tangier within the Spanish Protectorate has again awakened the hopes of the Spanish population and undoubtedly excited the French. The unwillingness of France and England to accede to Spain's desires, coupled with a growing belief that the Italian Government will demand a share in the deliberations to be held this winter upon the fate of the town, has further added disturbing ingredients to an already unstable and sensitive mixture.

Without therefore considering the strategic or European political factors which so largely influence all the powers in respect of their decisions as to the status of Tangier and its Zone, what is the solution most likely to satisfy the inhabitants, native and European?

There are sixty thousand subjects of his Cherifian Majesty living within the neutral Zone. They have no desire to change their status so as to become part of a Spanish Protectorate. The experience of their fellow-countrymen a few miles away, who even yet are struggling to retain the freedom of their native hills, does not incline them to submit to that administration. Nor do they wish to be governed entirely by the French, although in the present circumstances a change in this sense is not contemplated.

As for the European residents, opinion is, of course, divided, largely upon national lines. The Spaniards wish to absorb Tangier within their own Protectorate. The French, knowing that it can never be a part of the French Zone, wish it to remain as it is, and are not particularly

desirous to see Italy become an adherent to the present Statute. The English are divided. Those with large commercial interests are inclined to think that, if the town were given to Spain, their properties would appreciate in value and their business interests would revive.

Regarding the matter impartially, without any national or financial bias, it would seem that revision of the Convention is urgently necessary. That, whilst retaining the neutral and international régime, there must be some alteration of the present constitution which will give to the Spanish residents a greater share in the Administration. There must also be some provision whereby the Spaniards can suppress contraband trade with the natives of their own Protectorate. Topographical conditions of the frontier make this impossible when only one side of the boundary is patrolled. The native administration, controlled as it is from Rabat and therefore subject to French influence, requires alteration. All these requirements could be satisfied without serious disturbance to the present forms of government.

A Spanish chief administrator, and a Chief of Police of the same nationality would, added to what they already hold, endow the Spaniards with that preponderance in the Administration which they desire. The inauguration of the Gendarmerie provided for in the Statute with a Spanish officer in command would remove all doubt as to effective suppression of contraband along the frontier of the Spanish Zone.

Such changes as are required in the native administration would have to be effected by "Sultan's Dahir," and therefore would constitute a concession by the French. They should comprise a delegation, made by the Sultan, to the Mendoub, of the powers of a Khalifa similar to those of the Khalifa of Tetuan. A Khalifate of the Tangier Zone under the International Legislative Assembly would maintain the separateness of Cherifian administration, without any question of undue influence by France or any other Power.

Beyond these, there are many minor changes which are being considered by the local experts. There is always the vexed question of public gambling which is forbidden by law, but openly permitted.

According to current reports, there are to be held, early in November, preliminary conversations between Great Britain, France and Spain upon the question of revision of the Statute. These will no doubt be followed, in due time, by a plenary conference. The attitude of Italians in Morocco makes it impossible to avoid the inference that Signor Mussolini may claim to be a party to all the decisions taken. If this were the case, and Italy became an adherent to the new Constitution, her presence will automatically balance the scales of power between France and Spain without in any way depriving the British of their present very enviable position, which arises out of a far-sighted determination to maintain the neutrality of Tangier together with a policy of complete political disinterestedness in the Empire of Morocco.

THE GREEK MILITARY REVOLUTION

By LIEUTENANT L. VILLARI, M.C. (Italian Army ; late Liaison Officer at British G.H.Q., Salonika).

THE origins of the recent military uprisings in Greece must be sought in the events of the war years. King Constantine had created for the Balkan wars an army of considerable size and of a certain efficiency. But it was commanded for the most part by men of pro-German sentiments, or, at all events, with a military education of a German type. King Constantine himself does not appear to have been in favour of the Central Empires, and was even prepared, under certain conditions, to co-operate with the Western Allies in the Dardanelles campaign. But the leading generals, the staff and field officers were either pro-German or at least convinced that Germany would be victorious, and, consequently, favoured neutrality. The neutrality of the Greek kingdom resulted in the Venizelist secession in Macedonia, where another Greek Government was set up and another army created which were definitely pro-Entente and determined to participate in the war in view of the advantages which it was hoped that Greece might thereby secure with the help of the Allies. This army consisted of three good divisions (Serres, Crete and the Archipelago Divisions), mostly volunteers ; it assumed the name of Army of National Defence and was commanded by General Zimbrakakis. It took part in several minor operations, but was divided into small units scattered among Allied forces and under Allied higher commands.

When in June, 1917, King Constantine was deposed and Alexander became King with M. Venizelos as Premier, Greece formally declared war on the Central Empires and placed the regular Greek army as well as the National Defence divisions, at the disposal of the Commander-in-Chief of the Allied Armies in Macedonia. But before it could take part in military operations or even be sent up into Macedonia, it had to undergo a course of intensive training under French officers based on the experiences of the war, and also to be subjected to a process of *épuration*, so as to purge it of officers who were suspect either as pro-Germans or as "Royalists," as the supporters of the ex-King Constantine were called. This involved the removal of most of the generals and field officers, also a number of rapid promotions of subalterns to higher rank, while many N.C.O.'s received commissions, so as to place the army as far as possible under Venizelist control. Nevertheless, a certain dualism was created in the army, as a great many Royalists and lukewarm supporters of the new régime still remained, and in any case, the officers of the Army of National Defence, who had been fighting longer and had volunteered for service against the Central Powers and Bulgaria, considered themselves politically and militarily superior to their new comrades, who had only intervened in the war under strong Allied

pressure. This state of things was, of course, not inductive to efficiency. The Commander-in-Chief was at first General Danglis, and later General Paraskevopoulo.

The Greek forces, both Venizelist and regular, distinguished themselves in some very hard fighting on the Srka and on the Doiran front, and after the Armistice took part in the operations in South Russia. On one occasion in the Crimea it was actually the Greeks who restored order among some French detachments infected with Bolshevik propaganda.

But when the war was over for the rest of the Allies, the Greeks found themselves saddled with the formidable task of conquering and subduing Western Anatolia in the face of a revived and fanatical Turkish Nationalism. While the war was going on the Greek general election of November, 1920, held after the death of King Alexander, gave an unexpected turn to events. The Venizelist party was completely defeated, and King Constantine replaced on the throne. The change of Government was reflected in the army, then almost wholly concentrated in Anatolia and in Thrace. The Venizelist generals and many staff and field officers were dismissed, old Royalist officers recalled, and again rapid promotions were resorted to to fill up the gaps. This was the second change of leaders in three years, and like the first, did not fail to have injurious effects on the Army, both because such changes during a war are in themselves undesirable, and because the new men entrusted with the higher commands had not the experience of their predecessors in Anatolian and Macedonian warfare. The campaign was indeed beyond the resources of Greece, and the expense, even with French and British assistance, became an intolerable burden.

The outcome of this situation, after a period of very hard fighting, in which the Greek soldiers again distinguished themselves and showed great staying power, was the disastrous defeat of the Greek army in the autumn of 1922, and its withdrawal, together with that of the local Greek population from Anatolia, to continental Greece and the Islands. That the country should have proved able to survive this catastrophe without a general collapse is undoubtedly a proof of the qualities of the people.

But the presence in so small a country of a large defeated army, with a complement of officers in excess of the needs even of that army, created a serious political problem and resulted in the abolition of the Monarchy. There was now a third change in the personnel, and many of the old Venizelist leaders were recalled once more to replace their Royalist successors who were in turn dismissed or pensioned. The old dualism, first created in 1917-1918, still survived, but in an acuter form. There was, moreover, a very general feeling of discontent among the great majority of the officers; accustomed as they had been to life in Anatolia, where, although there was often very serious fighting and material hardship, they

had enjoyed extra allowances and were well fed and equipped—to some extent on the British scale—they now found themselves forced to live on their small peace-time pay in a country where life was growing ever more expensive. Those who had been placed on the retired list were even worse off. Among both categories both parties were represented, and as there was little to occupy the officers, politics became their chief interest to a greater extent even than before. There was, therefore, plenty of material which a military leader with tendencies towards a *pronunciamento* could utilize.

It was at this time that General Pangalos, formerly chief of the staff to General Paraskevopoulo in Macedonia, came into prominence. He together with Colonel Plastiras and Colonel Gonatas, was a member of the revolutionary triumvirate, which ruled Greece after the Anatolian disaster, and was responsible for the execution of the ex-Ministers. After his coup d'état in 1925 Pangalos upset the Michalacopoulo cabinet, became head of the Government and did away with Parliamentary rule, which had certainly not done the country much good. He found his chief supporters among the Salonica Venizelist officers, who formed the most solid body of men on whom he could rely. He then created the Republican Guard, composed of men of the regular army, but better paid than the other troops and more firmly organized; he hoped to make of it a sort of body of Prætorians for the defence of his régime. During the period of his dictatorship some useful reforms were accomplished, and the Herculean task of settling the Anatolian refugees (over a million in number) in Macedonia and elsewhere was successfully continued with the assistance of the League of Nations. His foreign policy was successful. He established very close relations with Italy, with whom in the past there had been many causes of friction, and found a partial solution of complicated conflict with Yugoslavia over the port of Salonica. But Pangalos was not a man of ruthless severity and energy as he has often been depicted, and on more than one occasion he displayed a certain weakness and indulgence; nor was he able to reform the administration which still left a good deal to be desired, or to find suitable lieutenants for all the more important positions of trust. The result was that a good deal of opposition was engendered in the public at large, but more particularly in the army, which still contained many supporters of the past régime, and among the ex-officers dismissed from the service or placed on the retired list for political reasons. The chief weakness of the Pangalos régime was that it had no organized party or strongly welded body of supporters behind it, and that it was based only on the general discontent with the past governments, which was beginning to be forgotten, and on the personal prestige of one man who did not enjoy by any means a universal or enthusiastic popularity and was not endowed with great strength of will.

At one moment General Pangalos was prepared to form a Constitutional cabinet and to return to the Parliamentary régime, and actually

approached the Opposition leaders with a proposal of that kind. But he was met with the demand that he should not only hold the elections, but that, while they were being held, he should absent himself from Greece, and this he refused to do, remembering the unfortunate outcome of absence in similar circumstances of the ex-King George II. He continued to make wholesale arrests of his opponents including ex-Ministers and other prominent persons.

Among Pangalos's opponents was General Condylis, who had had a fairly distinguished career in Macedonia and in Anatolia, although he had not held any command of the first importance. Subsequently he had been Minister of War in the first Republican cabinet, and Minister of the Interior in the Michalacopoulos cabinet upset by General Pangalos. He made no secret of his hostility to the latter, and had at one time been relegated to the island of Santorin, one of the most undesirable places of exile. But he was eventually allowed to return, through Pangalos's indulgence, and he continued to plot against the Government in spite of the warnings he had received to abstain from political action. General Pangalos indeed did not realise the weakness of his own position nor the strength of the opposition to him in the army, so much so that in the summer of 1926 he went off for a holiday to Spetzai without any thought of danger.

As soon as Pangalos had departed Condylis intensified his activities, which were brought to the attention of the Minister of the Interior. The latter sent a doctor, who was a friend of his own and also of Condylis in an office car to warn the General for the last time. But the doctor sympathized with Condylis's attitude and went the round of the barracks with him on the night of 21st August, 1922, using the very office car, to rouse the troops against the dictator. The move was completely successful and the Pangalos régime collapsed without a show of resistance. Pangalos himself was arrested at sea, while trying to escape from Spetzai, and General Condylis, having seized power, placed Admiral Coundouriotis, one of the members of the former Venizelist triumvirate at Salonica, in the Presidential chair, with himself as Prime Minister.

The public showed but little interest in the new change of Government, although on the whole it appears to have accepted it not unwillingly. But in the army General Condylis found himself faced by an opposition party, and at one moment his situation was seriously menaced. The Republican Guard, which was deprived of the privileges it had enjoyed under the Pangalos dictatorship, assumed a threatening attitude. Condylis, however, staved off the danger with energy; he blockaded the Guard in its barracks and eventually disbanded it, arresting its leaders.

For the moment the Coundouriotis-Condylis régime appears to be in a strong position, and General Condylis professes his intention of remaining in office only until normal conditions are restored and the Republican régime secured. But whatever the results of the elections,

the army is still an uncertain quantity, and both in its ranks and in the country at large there is a considerable monarchical feeling—not all of it in favour of any member of the deposed dynasty, but in favour of a King in general—and General Condylis is a declared Republican. What the great mass of public opinion really desires is a definitely stable situation, and this can only be achieved by a drastic reduction of the army and the elimination of politics from its ranks. The general prosperity of the country and the industry of the people—both the native population and the Anatolian refugees—give good cause for an optimistic outlook.

ITALY AND JUBALAND

The Senate has passed the Bill to make law the decree of 15th August, 1924, giving effect to the convention between Great Britain and Italy for the cession of Jubaland to Italy, which was signed in London on 15th July of the same year.

CORRESPONDENCE

[Correspondence is invited on subjects which have been dealt with in the JOURNAL, or which are of general interest to the Services. Correspondents are requested to put their views as concisely as possible, but publication of letters will be dependent on the space available in each number of the JOURNAL.—ED.]

DEVELOPMENT OF CLOSER RELATIONS BETWEEN THE MILITARY FORCES OF THE EMPIRE.

TO THE EDITOR OF THE R.U.S.I. JOURNAL.

SIR,—In the report given in your August issue of Lieut.-Colonel Crerar's very interesting lecture on "The Development of Closer Relations between the Military Forces of the Empire," reference is made in Section 5(c) to the desirability of a "more Imperial treatment in the appointment of Military Attachés"; the importance is urged of the Military Attachés at Washington and Tokyo visiting Canada, Australia and New Zealand *en route* to their posts; and the suggestion is made that assistant Military Attachés from the Dominions might be appointed in certain capitals. It may be of interest to record that on my appointment as Military Attaché at Tokyo, towards the end of 1921, sanction was given for me to proceed to my post *via* America and Canada, instead of by the usual, and cheaper, Suez route. The personal liaison established at Ottawa on that occasion was continued by travelling *via* Canada to and from England on leave during 1924.

One result of these visits was that Major-General J. H. MacBrien, the Canadian C.G.S., visited Tokyo in the Autumn of 1924, and attended the Imperial manœuvres of the Japanese Army. As a further development, the question of a young Canadian officer being selected to study the Japanese language, and to be attached to the Japanese Army—in the same way as officers of the British and Indian Armies have been attached for the past twenty years and more—was broached and warmly welcomed by the Japanese military authorities.

As regards Australia, in 1921, two Australian officers were sent to Japan for two years to study the language; and only lack of funds prevented my returning to England *via* Australia this spring on the termination of my appointment, in order to establish personal contact at Melbourne (and perhaps Wellington), as had already been done at Ottawa.

The proposal for an assistant Military Attaché from the Dominions is not only a financial matter, but, as far as Tokyo is concerned, is governed by the necessity of having an officer with a knowledge of the Japanese language. It may be remarked incidentally that the relief ship "Australmount," sent to Yokohama by the Commonwealth Government after the great earthquake of September, 1923, was accompanied by one of the two officers mentioned in the preceding paragraph; his knowledge of the Japanese language and customs naturally proved invaluable to all concerned.

Yours, etc.,

F. S. G. PIGGOTT, Colonel
(late H.M.'s Military Attaché at Tokyo).

14th September, 1926.

REGULAR OFFICERS AND THE TERRITORIAL ARMY.

TO THE EDITOR OF THE R.U.S.I. JOURNAL.

SIR,—It occurs to me that the policy of placing regular officers in command of certain Territorial Army units (e.g., Brigades of R.A.) having been in operation for some years, expressions of view as to the working of this policy would be of interest.

Personal observation leads one to the following conclusions, both for and against the practice :—

(A) *Advantages.*

- (i) An increase in the number of regular officers brought into active association with the Territorial Army with a corresponding, and very desirable, appreciation of the spirit, capabilities and difficulties of that force.
- (ii) In most cases, an inevitable tightening-up of the whole mechanism of the unit by applying, as far as possible, regular Army methods of unit administration, organization, instruction and discipline.
- (iii) Membership of a Territorial Army County Association with all that such membership teaches of the methods of administration and equipment of that force.
- (iv) Experience in obtaining a maximum result from a minimum of personnel and materiel.
- (v) An already-acquired knowledge of the Territorial Army, which would prove invaluable should the officer concerned ever be placed in command of a mixed Regular and Territorial force in the field.

(B) *Disadvantages.*

- (i) The danger of a unit, containing both a Regular C.O. and Adjutant, becoming too "regularized" to the prejudice of the exercise of command and responsibility by Territorial officers.
- (ii) The risk of discouragement to Territorial officers of the unit who, after many years' service, may have either their promotion to command retarded or be led to doubt whether they can attain command at all.
- (iii) The possible appointment of a Regular officer with little experience of the Territorial Army, or even one with but little sympathy with its unavoidable shortcomings in certain directions.
- (iv) Loss of representation on the Territorial Army Association by a *bona fide* Territorial officer. This is of some moment when a unit is represented by only one officer as is often the case.
- (v) The restricting effect on a reasonable state of independence which must almost inevitably result from the appointment of a Regular officer who is following, merely, a tour of duty and consequently has to bear in mind the effect of his superior's annual confidential report upon his career in the Service when his temporary service with the Territorial Army ceases.

It will be seen that points both for and against are identical in number and I leave it to those who may be sufficiently interested to decide for themselves upon which side the balance falls and, perhaps, to give expression to their opinion through the medium of the JOURNAL.

Yours, etc.,

18th October, 1926.

"Ex-ADJUTANT."

ECONOMIC INTELLIGENCE.

TO THE EDITOR OF THE R.U.S.I. JOURNAL.

SIR,—I have noticed that my article on "Economic Intelligence," to which you were so good as to give prominence in the May JOURNAL, was discussed in the July issue of the *Army Quarterly* by Major G. M. Routh, C.B.E., D.S.O., R.A. The original object of that article was to direct attention, if possible, to the fundamental importance of acquiring accurate industrial data whereon to base any correct strategic plan; it was also intended to promote discussion on a subject which had been broached all too little in British Service publications.

It is, consequently, of interest to learn from Major Routh that the office of the Master General of Supply in India is now entrusted with the economic survey of the changing industrial factors in India. But one would perhaps like to know more about the composition of the committee or other organization to which the collection and collation of industrial data will be entrusted. In putting forward the suggestion that representatives of the Army, Navy and Air Force (of both Imperial and Dominion status) should constitute a Sub-Committee of the Committee of Imperial Defence, emphasis was intended to be laid on the fact that in a military organization the military element should prevail. The required data do already exist in the offices of the various departments of State and in the economic sections of the Universities, but, if the successful prosecution of war be the object in view, then it must be so arranged that these data should be handled by naval and military officers. Further, all necessary travel should be undertaken by them and reports ultimately compiled by them. That the governing factor is financial is a circumstance not to be denied; nevertheless, loosely controlled liaison with civilian experts notoriously leads to the exploration of many side tracks with consumption of time and money.

It is certain, as Major Routh forcibly asserts, that those unsuited to the task of "G" will also be unsuited to a task of wider dimensions, of greater variety and of more than equal importance. For special work special men must be found.

Yours, etc.,

"ROUSSEAU."

August, 1926.

"THERE IS NOTHING NEW UNDER THE SUN."

TO THE EDITOR OF THE R.U.S.I. JOURNAL.

SIR,—Wing Commander C. F. A. Portal, in his letter which appeared in the August JOURNAL, is very possibly right in his criticism of a paragraph in my article under the above heading, but I should like to point out that the error to which he refers—if it is an error—is not mine and that it was not I who interpolated the words "English" and "of shot" in brackets. My quotation was taken just as it stands from "*The Manner of the triumph at Calais and Boulogne* / *The second printing With more additions as it was done indeed.* / *Cum privilegio Regali.*" as reproduced in Vol. II of "*An English Garner*," compiled by Edward Arber, F.S.A., etc., published 1st November, 1879.

The interpolations may have been the compiler's or, on the other hand, it is quite possible that they are to be found in the original, since it is not unusual to come across similar explanatory words in italics, placed between brackets, in old printed histories and pamphlets. The names of birds and beasts, real and mythical, were in common use to distinguish the different classes of ordnance at the period

referred to: "Falcons," "Sakers," "Falconets," "Basilisks," etc., etc. The Saker was a 5 pounder with $3\frac{1}{2}$ inch bore, but I do not remember to have seen the work "sakret" in this connection before.

Yours, etc.,

C. FIELD,

Colonel, Retired List.

WAZIRISTAN CIRCULAR ROAD.

TO THE EDITOR OF THE R.U.S.I. JOURNAL.

Sir,—In my article on the "Waziristan Circular Road," which appeared in your recent August number (pp. 569-71), I regret very much to find that one or two slight mistakes have crept into the map and text. They are of no importance, and do not invalidate my description of the road.

Amendments are suggested as follows:—

MAP.

- (a) Delete the projected road shown from Kot Murtaza to Khirgi.
- (b) Insert a road (poor, but existing) from Sarwekai to Wana; a new road between these two places is now projected, together with a further extension from Wana to Marobi.

TEXT.

- (a) In para. 1: "some six hundred miles," the actual figure is indeterminate.
- (b) In para. 7: Thal is sometimes spelt Tal, but should not be confused with Thal in the Kurram.
- (c) Draband may be spelt without the final d; sometimes it is shown, sometimes it is omitted.

I can otherwise vouch for the accuracy of my facts, having frequently travelled on the road.

Yours, etc.,

N.W. Provinces, India.

"ROUSSEAU."

THE OLD "IMPLACABLE."

On the return of the old two-decker line of battleship "Implacable" to Falmouth and the successful completion of Admiral of the Fleet Lord Beatty's Appeal for £25,000, the following letter was addressed to the Press by the Chairman of the Committee:—

Sir,—As Chairman of the Committee of the "Implacable" Fund for which Lord Beatty appealed in the Press last autumn, I beg leave to report that the first and most essential object of the Fund has now been achieved.

The repair of the under-water fabric and the exterior of the ship has been carried out by the Admiralty Dockyard at Devonport, and she has now been towed to her new moorings in Falmouth Harbour, where she arrived on 1st September, and was visited the same day by the Mayor of Falmouth and other members of the Committee.

The work on the internal fittings and painting has still to be executed under the direction of Mr. Wheatly Cobb.

The total amount so far subscribed has reached the sum of £25,000 for which the original appeal was made. This includes a generous gift recently received from an American ex-service officer who desires to remain anonymous. After the expenses incurred at Devonport have been discharged there will be left in the Fund about £6,000, but a good deal more is required for the fitting-out and equipment of the "Implacable" as a Boys' Holiday Training Ship and the Committee earnestly hope that the public will help towards the completion of our enterprise by forwarding contributions to the Hon. Treasurer, Midland Bank, Westminster, S.W.

Yours, etc.,

OWEN SEAMAN.

3rd September, 1926.

GENERAL SERVICE NOTES

IMPERIAL DEFENCE COLLEGE.

Suitable premises for the Imperial Defence College have now been acquired in Buckingham Gate, London.

The first session will open on 15th January, 1927, and the course will last for a year. In addition to the officers specially selected from the three fighting Services, some of the principal civil Ministries will be represented amongst the students at the College.

As announced in the August JOURNAL, Vice-Admiral Sir Herbert W. Richmond, K.C.B., has been appointed as Commandant. He will be assisted by the following small staff :—

Navy.—Captain G. C. Dickens, C.M.G.

Army.—Colonel J. G. Dill, C.M.G., D.S.O., p.s.c.

Air Force.—Group Captain P. B. Joubert de la Ferte, C.M.G., D.S.O., p.s.c.

Secretary and Librarian.—Major L. A. Clemens, O.B.E., M.C.

LANDING EXERCISE IN SCOTLAND.

Advantage was taken of the presence of the Atlantic Fleet at Invergordon to organize a small local combined exercise in the form of a landing operation.

The objective of the attack was the wireless station near Castle Craig on the Shandwick peninsula. The forces engaged were :—

Red (attacking).—Vice-Admiral C. T. M. Fuller, commanding battle cruiser squadron.

H.M. ships "Hood" and "Repulse."

H.M. Aircraft Carrier "Furious," and Fleet Air Arm embarked.

2 Battalions of Royal Marines.

1 Company of Black Watch from Fort George.

Blue (defending).—Captain B. E. Domville, R.N., commanding H.M.S.

"Royal Sovereign."

400 Seamen from the Fleet, and a force of Aircraft from Novar.

The landing party was embarked in H.M.S.s "Hood," and "Repulse," and arrived off the peninsula about five miles out from their objective just before dawn on Monday, 27th September. The weather was bad and considerable sea running as the party approached the beach in six boats.

On sighting the enemy, the defenders put up a heavy smoke screen. This seems to have re-acted against the defence by screening the boats from machine-gun fire until they were close inshore.

A landing was effected with considerable difficulty, and the troops got very wet and cold before they reached the shore. The open boats were attacked by the defending aircraft and would undoubtedly have suffered severe casualties. For half an hour or so the Blue aeroplanes appear to have had the air to themselves before the Red air forces appeared on the scene. In practice, this lack of air support would probably have resulted in the complete defeat of the attack.

As it was, the Red force, in spite of its physical discomfort, advanced in good order, and at once drove in Blue's outer defences, and eventually captured their objective.

An unknown quantity, of course, was what would have been the effect of the ships' fire. This, with observation by the fleet aircraft, would, doubtless, have caused great destruction to the shore defences, but it could not have afforded the landing party adequate protection from air attack when nearing the beach.

A FRENCH LANDING EXERCISE.

Press reports state that a combined landing exercise was carried out on the 3rd-5th August in the neighbourhood of C  tte, on the coast of Languedoc.

The forces employed were the Mediterranean Squadron, under the command of Vice-Admiral Violette, and the 16th Army Corps. It is understood that Vice-Admiral Fatou, who is responsible for the defence of the coast of the 5th Arrondissement, directed the shore operations.

The general scheme of the exercises appears to have been that a raiding force composed of the battleships (with troops embarked), destroyers and some mine-sweepers of the Mediterranean Fleet, and a force of seaplanes, should endeavour to bring off a bold *coup de main* by an attack and night landing on the coast to the north of Port de la Nouvelle and east of Narbonne. The rocky hills around Armissa were to be seized and the position held. It would seem that the defending forces had about twelve hours' warning in which to organize the defence. Troops were embarked at C  tte in the early morning of 3rd August and the squadron then proceeded and, after being attacked by the submarine defence flotilla, swept its way in through an imaginary minefield and commenced a bombardment of the coast. The defending air force, having been warned by a dirigible of the squadron's approach, carried out a strong attack. The landing was effected at night apparently with success, but what the force consisted of, either in men or guns, is not mentioned; the corps of "Fusiliers marins" took part with the troops. In the morning of the 4th the landing party, supported by the ships' guns and seaplanes, moved forward, during which time they were subjected to constant attacks by bombing and machine-gun fire from the defending air force. The defence, however, was not strong enough to prevent them consolidating during the evening the positions gained. August 5th saw the home forces greatly strengthened and a vigorous counter-attack by land and air was carried out. The number of narrow defiles thereabouts gave the troops of both sides an excellent opportunity for manoeuvring but, owing to the lack of roads and the rugged nature of the ground, communications were difficult.

It is probable that the main object of the operations was to exercise the coast defences—an exercise with some variety for the fleet being a minor objective.

THE U.S. PANAMA MANŒUVRES.**LESSONS IN HARBOUR ATTACK AND DEFENCE.**

In an article appearing in the October number of the *Journal of the United States Infantry Association*, First Lieutenant Lilley, lately an assistant to G.3. Panama Canal Department, gives an account of the three combined exercises held earlier in the year. Two of these were designed to test the defences of the Atlantic end of the Canal, and the third those of the Pacific end.

The author describes the exercises in some detail and deduces lessons, some of which are of interest as showing the state of development of those defences and others as being of general application. The principle points are :—

Naval.

- (a) The value of an adequate naval water and air patrol for harbour defence was particularly brought out.
- (b) The importance of submarines in defence against attacks of this kind was emphasized to both defending and attacking forces.

Military.

- (c) Proficiency in jungle fighting and in beach combat, and the action of the troops acting as the enemy was worthy of comment. Their ability to negotiate all sorts of jungle, their rapidity of progress and their excellent physical condition on arrival, indicated a high state of training.
- (d) The superiority of portée artillery over pack artillery was noticeable. One battery of Field artillery was equipped as portée artillery, and, showed its advantages over pack artillery by its power of mobility, its ability to function in the local terrain and in other respects.
- (e) The practicability and desirability of pack transportation for machine gun companies of Infantry regiments and for machine guns in the rifle companies of these regiments was demonstrated, especially, in the night operations in the land phase of the exercises.
- (f) Frequent exercises of a tactical nature appropriate to the local terrain, and involving march discipline and night operations, are desirable.

Air.

- (g) It is essential to get early information of enemy air activity conveyed to the defending air force and anti-aircraft artillery ;
- (h) The form which enemy air attacks are likely to take requires special study. Particularly dangerous to the defence will be air attacks launched from naval vessels behind smoke screens and under cover of darkness from positions close in shore ;
- (i) The value of night air observation and the need of special training and improvement in present equipment for operating at night was demonstrated.

Local Defences.

- (j) It is necessary to provide for "close in" protection of the fixed fortifications by harbour defence units ;
- (k) The tactical use of searchlights requires developing. In the first exercise "barrier" lights were not used. In the second, they were operated

continuously to cover the breakwater entrance. While all craft coming within range were illuminated and no hostile craft passed the breakwater, the defending submarines and surface craft were silhouetted to the enemy;

- (l) The trial of smoke screens appeared to indicate the non-effectiveness of shore batteries when their targets are obscured by these screens.

Communications and Intelligence

- (m) The importance of wireless silence to both attack and defence was emphasised. In the first exercise the attacking forces maintained silence, the defenders did not, with the result that the W/T detector system of the former enabled them to obtain, fairly accurately, the positions of the naval and other units of the latter as well as to intercept valuable information of their plans;
 - (n) All available means of communication, and not only the telephone, because it is the most handy, should be used;
 - (o) The services of security and information require developing in unit training;
 - (p) Training is required in the dissemination and evaluation of military intelligence.
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NAVY NOTES

GREAT BRITAIN.

FIGHTING ON THE YANGTSE.

During the past quarter British naval forces on the China Station have been actively engaged with the Chinese on the Upper Yangtse. The main facts in relation to the action were given by the Prime Minister in the House of Commons on September 28th, when he stated that: At the end of August General Yang Sen, the titular civil governor of Szechuan, seized two steamers belonging to the Chinese Navigation Company, Limited, alleging that another steamer of the same company had sunk a boat carrying some of his troops and a certain amount of money. The six British officers of the two steamers were kept in custody by him. The Commander of H.M.S. "Cockchafer" endeavoured to conduct negotiations for the release of the ships and their officers, but General Yang Sen refused to discuss the matter with him, and threatened to fire on H.M.S. "Cockchafer" if she moved or an ultimatum were delivered, posting troops for this purpose. His Majesty's Consul at Chungking proceeded to Wanh sien, and from 2nd September to 5th September was, under instructions from H.M. Minister at Peking, constantly using all his exertions to secure a peaceful settlement of the affair, including the offer of an inquiry, but General Yang Sen proved absolutely unyielding and defiant, ignoring even messages sent to him by Wu Pei-fu, his superior General, and imprisoning the messenger who bore them.

It was in these circumstances that His Majesty's Government reluctantly decided that if a solution by conciliatory measures proved in the last resort absolutely impossible, the only alternative was to use force to rescue the imprisoned ships' officers. The naval expedition which proceeded to Wanh sien for this purpose was received with heavy fire; the fire was consequently returned. The British casualties were three officers and four seamen killed, two officers and thirteen seamen wounded. Of the six imprisoned officers of the Mercantile Marine, five were rescued, the sixth being drowned. The Chinese casualties have not yet been reliably established, but my latest information indicates them to be very much less than originally rumoured.

As a result of this action Yang Sen offered to discuss further the question of the return of the illegally seized ships, and sent the Commissioner for Foreign Affairs at Chungking to Ichang to meet Rear-Admiral John Ewen Cameron, Senior Naval Officer on the Yangtse, for this purpose. In these negotiations our attitude has been that while we were willing to discuss the holding of an inquiry into the alleged sinking of the boat and of the drowning of General Yang Sen's soldiers, the return of the steamers must be a condition precedent.

SHIPS RELEASED.—The steamship "Wantung," one of those seized, arrived at Ichang on 25th September with the bodies of Commander Darley and two able seamen on board, and their funeral took place next day. The "Wanh sien," the other vessel seized, was also released at the same time, arriving at Ichang on the 28th. With the surrender of the vessels, the Wanh sien incident was deemed to be closed.

CASUALTIES.—The officers killed in the action at Wanh sien were Commander F. C. Darley, of the cruiser "Despatch," commanding the expedition; Lieutenant A. R. Higgins, of the "Despatch" and Lieutenant C. F. Ridge, of the "Cockchafer." Lieut. Commander L. S. Acheson, D.S.C., commanding the "Cockchafer," and Lieutenant O. Fogg-Elliott, of the "Mantis," were among those wounded. The vessels seized by General Yang Sen were the "Wantung" and "Wanh sien," belonging to Messrs. Butterfield & Swire.

ADMIRALTY ACCOUNT.—An official account of the affair issued by the Admiralty on 7th September, stated that the object of the operation, which was carried out by H.M. Gunboats "Cockchafer" and "Widgeon" and the steamer "Kia Wo," the latter manned by officers and men from H.M. Ships "Despatch," "Mantis" and "Scarab," was to effect the rescue of six British officers of the Mercantile Marine held captive on board two British steamers by three hundred Chinese soldiery, and to recover the steamers themselves if possible.

In the face of field gun and rifle fire from the shore, the rescue of five of the six British Mercantile officers was effected. It is believed that the sixth officer was shot whilst swimming for safety. The "Cockchafer," previous to the arrival of the "Widgeon" and "Kia Wo," was in a dangerous position owing to the action of the Chinese. The operation was successful in extricating her. Their Lordships, "while deeply regretting the loss of valuable lives and the number of casualties suffered, note that the traditional gallantry of his Majesty's Service was fully sustained by all officers and ratings who took part in the hazardous expedition." In a message to the Commander-in-Chief in China, Vice-Admiral Sir E. S. Alexander-Sinclair, their Lordships desired "that an expression of their warm appreciation" might be conveyed to all officers and ratings concerned.

THE FLAG LIST.

NEW COMMANDERS-IN-CHIEF.—On 23rd September, the Admiralty announced that Vice-Admiral Sir Edwyn S. Alexander-Sinclair, K.C.B., M.V.O., had been selected to be Commander-in-Chief, the Nore, in succession to Admiral Sir William E. Goodenough, K.C.B., M.V.O., to date about 1st April, 1927. Vice-Admiral Sir Reginald Y. Tyrwhitt, Bt., K.C.B., D.S.O., D.C.L., is to be Commander-in-Chief, China Station, in succession to Vice-Admiral Sir Edwyn S. Alexander-Sinclair, K.C.B., M.V.O., to date 8th November. Vice-Admiral Tyrwhitt will assume command about 7th January next. Rear-Admiral David M. Anderson, C.B., C.M.G., M.V.O., is to be Commander-in-Chief, Africa Station, in succession to Vice-Admiral Sir Maurice S. Fitzmaurice, K.C.V.O., C.B., C.M.G., to date 27th December. He will assume command about 7th February next.

REAR-ADMIRALS' APPOINTMENTS.—It was announced on 6th October that the following flag appointments had been approved:—Rear-Admiral Lionel G. Preston, C.B., to be Rear-Admiral Commanding Third Cruiser Squadron, in succession to Rear-Admiral John W. L. McClintock, C.B., D.S.O., to date 24th December. Rear-Admiral Preston will assume command about 22nd January next. Rear-Admiral Rudolf M. Burmester, C.B., C.M.G., to be Director of the Mobilization Department, Admiralty, in succession to Rear-Admiral Robert N. Bax, C.B., to date 18th December. Rear-Admiral Burmester will be appointed to the "President," for duty inside the Admiralty, on 11th December.

FIRST AND PRINCIPAL NAVAL A.D.C.—On the retirement of Admiral Sir Montague E. Browning, G.C.B., G.C.M.G., M.V.O., to date 4th October, the King

approved the appointment of Admiral Sir Arthur C. Leveson, K.C.B., to be First and Principal Naval Aide-de-Camp to His Majesty, from the same date.

DIRECTOR OF NAVAL INTELLIGENCE.—On 10th August, the appointment was announced of Rear-Admiral William Wordsworth Fisher, C.B., C.V.O., to be Director of Naval Intelligence on the Naval Staff, temporarily, vice Rear-Admiral Alan G. Hotham, C.B., C.M.G., to date 17th August.

FLAG LIST CHANGES.—A run of promotions to, and retirements from, the Flag List took place following the decision of Vice-Admiral Douglas L. Dent, C.B., C.M.G., to retire, at his own request, to date 6th August. The consequent changes were as follows:—Rear-Admiral A. K. Waistell, C.B., promoted to Vice-Admiral in H.M. Fleet, to date 6th August. Captain H. R. Godfrey, C.B., D.S.O., A.D.C., promoted to Rear-Admiral in H.M. Fleet, to date 6th August. Rear-Admiral Godfrey has been placed on the Retired List, to date 7th August. Captain Ernest Wigram, C.M.G., D.S.O., A.D.C., promoted to Rear-Admiral in H.M. Fleet, to date 7th August. Rear-Admiral Wigram has been placed on the Retired List, to date 8th August. Captain S. L. Willis, A.D.C., promoted to Rear-Admiral in H.M. Fleet, to date 8th August. Rear-Admiral Willis has been placed on the Retired List, to date 9th August. Captain (Commodore, 2nd class) A. J. B. Stirling, C.B., A.D.C., promoted to Rear-Admiral in H.M. Fleet, to date 9th August. In consequence of the foregoing, the following promotions take place on the Retired List:—Captains: C. L. Cumberlege, R.N., to be Rear-Admiral, to date 7th August; C. Mackenzie, C.I.E., D.S.O., H. H. Holland, C.B., A. E. Wood, C.M.G., to be Rear-Admirals, to date 8th August.

On 6th October, the retirement was announced, to date 4th October, of Admiral Sir Montague E. Browning, G.C.B., G.C.M.G., M.V.O., in consequence of which the following promotions took effect from the same date, viz.:—Vice-Admiral Sir Edwyn Alexander-Sinclair, K.C.B., M.V.O., is promoted to be Admiral in His Majesty's Fleet. Rear-Admiral Walter M. Ellerton, C.B., is promoted to be Vice-Admiral in His Majesty's Fleet, and Captain John M. Casement is promoted to be Rear-Admiral in His Majesty's Fleet.

Consequent on the above, the following promotions on the Retired List took place from the same date: Vice-Admiral Sir Lionel Halsey, G.C.M.G., G.C.V.O., K.C.I.E., C.B., to be Admiral, and Rear-Admiral V. G. Gurner to be Vice-Admiral.

PERSONNEL AND TRAINING.

COMMODORE'S EPAULETTES.—It has been decided with the King's approval that the epaulette devices for Commodores and Captains shall be as follows: for Commodores, first and second class, a crown, two stars 1 in. in diameter, "placed side by side in a horizontal line," an anchor and chain cable. For all Captains, a crown, one star 1½ in. in diameter, an anchor and chain cable. Hitherto Commodores and Captains over three years' seniority have had their two stars 1½ in. in diameter, and no stipulation has been made about them being placed side by side. Captains under three years' seniority have hitherto worn the devices now ordered for all Captains.

BATTLE LECTURES.—An addition has been made to the catalogue of lantern lectures on naval professional subjects of one entitled "Plans of British Naval Battles," with fifty-six slides, based on Professor G. A. R. Callender's volumes, "Sea Kings of Britain." This lecture is intended mainly for warrant officers.

REVERSION TO LOWER RANK.—The expression, "reverting for unsuitability," is to be used in future instead of "disrating for incompetence." Reverting for unsuitability is not to be carried out by warrant nor included in the punishment return, as it is not awarded as a punishment.

MATERIAL.

H.M.S. "OBERON."—The submarine formerly known as "O.I." was launched at Chatham on 24th September and named H.M.S. "Oberon." The event had been fixed for the previous day, and Mrs. Beaty-Pownall, wife of the Admiral-Superintendent, performed the christening ceremony then, but owing to the rapid rise of the tide it was found impossible to remove the last two blocks except at great risk to the workmen employed in the task. The "Oberon" was placed in commission for trials forthwith, so that her officers and crew may be familiar with their vessel by the time she is ready for sea.

NEW DESTROYERS.—On completion, H.M. ships "Amazon" and "Ambuscade" will be temporarily attached to the Atlantic Fleet, pending a decision as to their allocation. During this period, the ships will proceed in company on a cruise for trials to the tropics, visiting Sierra Leone, Lagos and Gibraltar.

NEW MINELAYER.—H.M.S. "Adventure," which was the first surface man-of-war to be laid down for the Royal Navy after the signing of peace, her keel being laid in November, 1922, is being commissioned for trials at Devonport this month. She is a new type of cruiser minelayer.

H.M.S. "THUNDERER" REPLACED.—H.M. ships "Thunderer" and "Erebus" paid off at Devonport on 31st August, and the latter recommissioned next day with a special complement as an independent command for duty as Senior Officer's and Parent Ship, Devonport Reserve, Turret Drillship and Training Ship for Special Entry and Paymaster Cadets. The "Thunderer" passed into the charge of Reserve Fleet officers pending her being taken in hand for scrapping under the Washington Treaty.

CRUISER CONTRACT.—The Palmers' Shipbuilding and Iron Co., Ltd., Jarrow and Hebburn-on-Tyne, in October received an order for one of the two cruisers in the 1926-1927 programme to be built by contract. The other has not yet been ordered.

SUBMARINE DEPOT-SHIP ORDERED.—The contract for the large submarine depot-ship provided for in the 1926-27 Estimates was placed in September with Messrs. Vickers, Ltd., Barrow. The main propelling machinery will consist of twin-screw double-acting internal combustion engines, to be manufactured under licence at Barrow from the M.A.N. Co. (Maschinenfabrik Augsburg Nuremberg A.G.).

EXERCISES AND CRUISES.

THE ATLANTIC FLEET AT INVERGORDON.—For the autumn exercises of the Atlantic Fleet, carried out from Invergordon, selected newspapers were invited to send representatives, in order to inform the public of the peace-time training of the Navy. On 27th September, a raid on the Scottish coast to capture a wireless station was carried out in co-operation with companies of the Black Watch from Fort George, and aeroplanes from Novar aerodrome. Vice-Admiral Fuller, in the "Hood," was in charge of the attacking force, and Captain B. E. Domville, of the "Royal Sovereign," of the defence. Other operations included night firing.

(See also *General Service Notes*.)

CONTINENTAL VISITS.—A visit to Antwerp from 3rd to 10th September was made by the Second Cruiser Squadron under Rear-Admiral W. A. Howard Kelly, and to Amsterdam from 11th to 18th September. The Squadron consisted of the "Curacoa," "Cambrian," "Cleopatra" and "Comus."

NEAR EAST CRUISES.—The autumn cruise of the Mediterranean Fleet was carried out in the Aegean Sea from 23rd August, among the places visited being Imbros, Skiathos, Salonika, Kavala, Dedeagatch, and Mitylene. An assembly of all the squadrons and flotillas took place at Volo from 15th to 26th September. Afterwards two cruisers, the "Danae" and "Dauntless," went into the Black Sea, visiting Varna, Galatz, Burghas and Constanza.

H.M.S. "DURBAN" AND HER NAME PORT.—The cruiser "Durban" left the China Station early in September for Devonport to recommission, and was ordered, on her return journey, to proceed via the Cape and visit Durban in December. This was the first occasion that she had been to her name port.

SOUTH AMERICAN CRUISE.—On her way out to the North America and West Indies Station, where she replaces the "Constance," the "Colombo," Captain A. M. Lecky, D.S.O., proceeded via the South-East Coast of America and through the Magellan Straits, visiting ports in Chile. Captain Lecky being detained in hospital at Rio de Janeiro, his place was taken temporarily by Captain J. S. C. Salmond, Naval Attaché at Buenos Aires.

VISIT TO JAPAN.—A cruise which was to have been made to Japanese waters by the "Vindictive," Captain R. Howard, was postponed on account of the situation in China, but the "Titania," "Marazion" and seven submarines went to Kobe, Takamatsu, Miyajima, Beppu, Nagasaki, and other ports.

SUBMARINE MISHAP.

Submarine "H.29" sank on 9th August in Devonport basin while undergoing refit, with the loss of a chief engine-room artificer and five dockyard workmen. The bodies of the victims were recovered on the morning of the 13th, when the hull had been raised, and at the inquest the jury found that the deceased men died from suffocation caused by the foundering of the submarine, which foundering was due to the misconception of an order.

On 14th September, the first of three courts-martial in connection with the mishap was held at Devonport to try Lieutenant Malcolm Edgar Wevell, second-in-command, on a charge of hazarding the vessel. It came out in evidence that the cause of the sinking was the trim of the vessel becoming so low that water entered through the after hatch, the upper deck hatches not having been closed during the trimming of the vessel down by about 9 in. at the bow for the firing of water shots. It was submitted that a statement of Lieutenant Wevell to Stoker Petty Officer G. W. Aske, "I am going to put a drop of water in No. 2 and 3 main ballasts," was made with the sole idea of letting him know what was about to take place, and was not intended in any way as a definite order. The operation of flooding was begun without the usual routine orders having been given and Lieutenant Wevell declared his ignorance that the operation had even been started. Finding the charge proved, the court ordered Lieutenant Wevell to be dismissed his ship and severely reprimanded.

A second court-martial assembled next day for the trial of Lieutenant F. H. E. Skyrme, commanding "H.29," who was found guilty of omitting to take charge of the ship under his command and of failing to have a clear

understanding with the executive officer as to what the latter's duties were in the existing conditions. He was sentenced to be reprimanded. On 16th September, the third and final court-martial was held on Stoker Petty Officer G. W. Aske, who was in charge of the tanks. He contended that what Lieutenant Wevell said to him was a definite and distinct order; which it was his duty to carry out. The court found the accused not guilty, and acquitted him of the charge.

It was announced on 30th September that submarine "H.29" was to be transferred to dockyard control at Devonport next day and taken in hand for preparation for sale during the current financial year.

OFFICIAL NARRATIVE OF THE LOSS OF H.M.S. "HAMPSHIRE."

On 9th August, in accordance with a promise made in the House of Commons by the First Lord, the Admiralty issued a lengthy official narrative of the loss of H.M.S. "Hampshire" on 5th June, 1916, with Lord Kitchener on board. Ever since the first great shock of this disaster, rumours of espionage, treachery and official negligence had been rife. It was to put an end to these rumours that the White Paper (Cmd. 2710, price 6d.) was issued. It embodies the knowledge derived from the evidence given at the court of enquiry on the disaster, as well as from contemporary official reports, signal logs and other reliable sources of information. After setting forth the whole story in close detail, it has been settled beyond reasonable doubt, the narrative states, that the disaster was caused by enemy mines, and corroborative evidence has been obtained from German naval sources. The conclusions reached are that the "Hampshire" was a suitable ship to convey Lord Kitchener; that her route was carefully selected; that the decision of the Commander-in-Chief was a prudent one in the difficult circumstances; that the loss of the ship was not due to treachery; and that the mines which destroyed the "Hampshire" were not laid with the intention of destroying any particular vessel or person.

THE FLEET AIR ARM.

NEW HEAD OF AIR SECTION.—Captain C. P. Talbot, D.S.O., formerly commanding the aircraft-carrier "Hermes" in the Mediterranean, on 27th September succeeded Captain T. F. P. Calvert, D.S.O., as Head of the Air Section of the Naval Staff. Commander R. B. Davies, V.C., D.S.O., A.F.C., from the battleship "Royal Sovereign," who was Head of the Section in 1920-24, has also returned to duty on the Naval Staff.

H.M.S. "HERMES" has been temporarily detached from the Mediterranean to the China Station.

H.M.S. "EAGLE" returned to England at the end of September and recommissioned at Portsmouth for a further period of service in the Mediterranean.

CASUAL AIRCRAFT FLIGHTS.—All officers and men of the Royal Navy and Royal Marines, states a Fleet Order, dated 10th September, 1926, may be ordered, as necessary, to make casual flights in aircraft in the course of their duties. No allowance or extra pay can be granted in such circumstances. This order indicates the extent to which aircraft have now come to be regarded as a part of the ordinary routine life of H.M. Naval Service.

VOLUNTARY TRAINING FOR CERTAIN NAVAL RATINGS AND R.A.F. PERSONNEL.—An Admiralty Order states that it has been arranged with the Air Ministry that classes of instruction are to be held in all aircraft carriers to train certain of the

Naval and R.A.F. personnel in these ships in trades of the sister Service corresponding to their own.

One of the objects of this instruction is to establish relations of mutual understanding between the two Services, and to enable the one to appreciate the duties and responsibilities of the other. But besides this, it is hoped that the instruction will eventually produce a potential reserve of trained personnel within the Fleet which can be drawn upon in case of casualties, sickness or a sudden but temporary call on the Fleet in peace or war, pending replacement by men from the proper Service.

Reports are to be rendered in six months time, stating the progress made and making suggestions for the improvement of the scheme.

ROYAL NAVAL RESERVE.

H.R.H. The Prince of Wales attended the R.N.R. Officers' Reunion Banquet on Friday, 22nd October, at the Hotel Victoria.

Capt. William Marshall, C.B., D.S.O., R.D., R.N.R., has been appointed A.D.C. to H.M. The King in place of Capt. William Halpin Paterson Sweny, C.B.E., R.D., R.N.R. (retired).

Capt. James Turnbull, C.B.E., R.D., R.N.R., has been appointed a member of the R.N.R. Advisory Committee in place of Capt. John McI. Borland, C.B., D.S.O., R.D., R.N.R.

ROYAL NAVAL VOLUNTEER RESERVE.

GENERAL.—The Vice-Admiral Commanding Reserves inspected the Ulster, Sussex and Bristol Divisions.

The Inter-Divisional Miniature Rifle Competition, and for which Sir Charles Walker presented a Cup, was shot for on 18th September, resulting in the Clyde Division being first; Sussex Division second; Tyne Division third; East Scottish Division fourth; Bristol Division fifth; London Division sixth; and Mersey Division seventh.

TYNE DIVISION gave a Regatta on 21st August, including an Inter-Port Whaler race, which Tyne Division succeeded in winning, with Sussex Division second, Mersey Division third, Ulster Division fourth, East Scottish Division fifth and Clyde Division sixth.

On 27th September, the Tyne Division Shooting team, in competition with the Territorials and others, won a shooting competition.

SUSSEX DIVISION.—On 14th August, Commander G. D. Belben, D.S.C., A.M., R.N., judged an Inter-Sub-Divisional Field Gun Competition, at which the Hastings No. 5 Sub-Division beat the Hove No. 2 Sub-Division by seven seconds in the final. At the Newhaven Athletic Meeting on 22nd September, the R.N.V.R. gave an interesting gymnastic display.

The Division in an Inter-Port Whaler race held at the Newport (Mon.) R.N.V.R. Regatta, on 4th September, secured first and second places.

On 19th September the Hove Sub-Divisions marched through Brighton and Hove headed by the Bluejacket Band of Portsmouth Barracks.

CLYDE DIVISION gave a display at Scotstoun, the ground being previously declared open by Lord Balfour. Their programme included a cutlass display by fifty men, field gun (illuminated) display, signal party with eight ships, and an attack by "Dervishes" on a party of seamen having field guns, etc.

EAST SCOTTISH DIVISION participated in a successful Military Tattoo on 30th September, at Dreghorn Castle, giving a realistic display, representing "life saving" by life boat and breeches buoy from a wreck.

DOMINION NAVIES.

SECOND AUSTRALIAN SUBMARINE.—On 7th September, the second of the two submarines building at the Vickers works at Barrow for the Royal Australian Navy was launched and named the "Otway," the first having been put afloat on 29th June and named the "Oxley." It is understood that they are of similar design to the "O" Class in the Royal Navy (see under MATERIAL).

AUSTRALIAN SQUADRON'S SPRING CRUISE.—The Australian Fleet, under Commodore G. F. Hyde, left Sydney for its spring cruise on 10th August, and visited Jervis Bay, Port Adelaide, Port Lincoln, Westernport, Port Philip, Geelong, Port Melbourne and Williamstown, being scheduled to return to Sydney on 18th November. The flagship "Sydney," with the cruiser "Adelaide," depot-ship "Platypus," and destroyers "Swordsman," "Success" and "Tasmania" made the cruise, and the "Melbourne," training cruiser, was temporarily attached to the Cruiser Squadron while in Port Philip for a portion of the time the Squadron was there.

CANADIAN SHIP AT ST. JOHN.—The Canadian destroyer "Patriot" visited St. John in July to meet the cruiser "Capetown" and the sloops "Valerian" and "Wistaria," when boat races between all the vessels and the St. John Company of the Royal Canadian Naval Volunteer Reserve were held. The "Patriot," under Lieutenant C. R. H. Taylor, R.C.N., went to the assistance of the crew of the Norwegian ship "Ringhorn," which was lost on Scatterie Island during a hurricane on 7th August, when five men were drowned.

FOREIGN NAVIES

(The latest reports, contained in these Notes, show that there is remarkable activity in new construction amongst practically all Foreign Naval Powers).

ARGENTINA.

NEW NAVY BILL.—On 30th September, it was announced that a Bill had been approved by Parliament to spend about £15,000,000 on the Navy. This will provide three cruisers, six destroyers and six submarines. The Bill also provides for initial work on a Navy yard at Fort Mar del Plata and for the enlargement of the yards on the River Plate and at Puerto Belgrano. The expenditure will be spread over ten years.

No new ships have been obtained for the Argentine Navy since the beginning of the world war, but existing ships have been modernised, including the battleships "Moreno" and "Rivadavia," which have been reboilered, fitted to burn oil instead of coal, and supplied with turbines instead of reciprocating engines.

BRAZIL.

NEW MINISTER OF MARINE.—Admiral Pinto Luz has been appointed Minister of Marine in succession to the late Admiral de Alencar, who died in April.

SCOUT CRUISERS RECONDITIONED.—The scout-cruisers "Bahia" and "Rio Grande do Sul," completed at Elswick in 1910, have recently been reconditioned by a local shipbuilding firm, who sub-contracted with Messrs. Thornycroft & Co., Ltd., for the new machinery and boilers.

CHILE.

NEW PROGRAMME.—The Chilean Government, which has had the assistance, since March last (see p. 170, February JOURNAL), of a British Mission, consisting of four Naval Officers and one Air Officer, is reported to have decided upon a programme of construction to cost about £11,000,000, and to include cruisers, destroyers and submarines, with a number of aircraft, some of which have already been ordered from an Italian firm. The hope is expressed in Chile that the surface and submarine craft will be built in Great Britain.

FINLAND.

NEW SUBMARINES.—Four submarines formed a part of the new programme of construction presented to the Riksdag last year. Early in September, 1926, it was reported that the first unit of this projected flotilla had been placed with the Vulcan firm in Finland, which works in co-operation with German and Dutch firms. The co-operation of German experts in the design of the submarines has been engaged.

FRANCE.

NEW CONSTRUCTION.—8,000 ton cruisers (designed h.p. 100,000 and speed 34 knots). The "Primaguet" completed her acceptance trials early in July. All the engine trials were carried out without a hitch in eleven days; they included power and consumption trials at 15, 30 and 32 knots, an eight hours' full power trial and a twenty-four hours' trial at 30 knots. The maximum h.p. obtained was 122,000, speed not stated.

The "Lamotte Picquet" commenced her official acceptance trials on 19th July, and in a six hour full speed trial developed 115,000 h.p. at a speed of nearly 34 knots. The "Duguay Trouin" had her propellers repaired and carried out trials off Glenans on 23rd July. She developed about 118,000 h.p. with a speed of 33.6 knots. It is reported that she has now satisfactorily completed her trials.

CRUISER LAUNCHED.—The cruiser "Tourville" was floated out at Lorient on 24th August. She is the second of the trio of 10,000 ton cruisers in hand, the first being the "Duquesne," launched on 17th December, 1925, at Brest, at which yard the third ship, the "Suffren," was laid down on 3rd May, 1926.

NEW DESTROYERS.—The new destroyers "La Railleuse," at Nantes, and "Le Mars," at Blainville, near Caen, have been launched since the last issue of the JOURNAL, the latter vessel on 28th August. They are of 1,471 tons, and will carry four 5.1 inch, two 1.5 inch guns, and six torpedo tubes. With 33,000 s.h.p., they are expected to develop 33 knots. The destroyer "Brestois" has been laid down at Nantes. She is the first of the four 1,495 ton destroyers of the 1925 programme.

NEW SUBMARINE.—A submarine which was due to be laid down at Cherbourg in October was stated to have been designed to be the largest in the world, with a surface displacement of 3,500 tons, as compared with the 2,525 tons of the British "X.1" and the 2,890 tons of the American "V.4." Her length will be nearly 400 feet, and she will have a larger fuel capacity than any existing submarine.

ROCHEFORT TO BE CLOSED.—Economies in the administrative departments of the French Navy announced in September, included the abolition of the dockyard at Rochefort. At Lorient, the abolition of the Prefecture Maritime, and of repair shops at the dockyard, will also result in economies; and certain retrenchment has been ordered at Gueriny and elsewhere.

NEW UNIFORM FOR OFFICERS.—Following the adoption of a mess dress, reported in the August JOURNAL, French naval officers will in future have a frock coat with roll collar similar to the British pattern instead of the present coat, buttoning to the chin, which is condemned as "unbecoming and unpractical, especially for evening reception." The existing tunic will be replaced by a monkey jacket.

NAVAL AIR SERVICE.

According to the report of the Senate Finance Commission on the 1926 Naval Estimates, the position of the Naval Air Service is as follows:—

Lighter than Air Machines.—Four non-rigid airships are in commission. The only rigid airship, "Méditerranée," has been dismantled.

Heavier than Air Machines.—The number of squadrons now in existence is twelve, not including the training squadron at Brest; this is an increase of two since the beginning of the current year, and is due to the formation of two new bombing squadrons composed of two-engined (Jupiter) Farman-Goliaths, fitted for either land undercarriages or floats.

These twelve squadrons are as follows:—

Four Bombing Squadrons;

Five Seaplane Reconnaissance Squadrons. Two of these have recently been re-equipped with Latham seaplanes fitted with three "Jupiter" engines. Two of these Latham's flew overland from the Channel to the Mediterranean in March, a proof of the confidence placed by the Ministry of Marine on their reliability;

Two Fighter Squadrons;

One, composition unknown.

The number of machines purchased during 1925 is 196 aeroplanes and 55 seaplanes. All the squadrons are now composed of post war machines, excepting for ten seaplanes.

The total number of machines in squadrons appears to be 133.

The strength of a squadron appears to be twelve machines, of which only nine will be in service during peace time, but owing to a shortage of personnel this latter figure is at present reduced to six.

Personnel.—The shortage of personnel, as revealed in the report, is serious, the number borne being 3,000, whereas the total required is 4,500.

The number of pupils at the school at Rochefort is only 50 per cent. of requirements.

HEAD OF NAVAL AIR SERVICE.—Rear-Admiral J. Frochot has taken up his duties at the Ministry of Marine as head of the Naval Air Service. His predecessor, Captain La Borde, is supervising the completion of the aircraft carrier "Béarn," and will take command of her on commissioning.

NAVAL CADETS' FLYING INSTRUCTION.—All Cadets at the Naval School at Brest have to do five and half hours actual flying during their time at this establishment. They manipulate the machines (dual control) while in the air, but not when landing or taking off.

GERMANY.

DESTROYERS LAUNCHED.—On 15th July, three new destroyers for the German Navy were launched at Wilhelmshaven in the presence of Vice-Admiral Bauer, Chief Director of Submarines in the High Sea Fleet during the war. The names of "Albatross," "Greif" and "Seeadler" were reported to have been given to these destroyers. Formerly, German torpedo craft were identified by initials and numbers. On 22nd September, two more were launched at Wilhelmshaven and named the "Condor" and "Falke." Captain Franz, Dockyard Director, recalled that on 22nd September twelve years ago the "Emden" bombarded Madras and submarine "U.9" sank the three British cruisers of the "Cressy" class.

GREECE.

REQUEST FOR BRITISH HELP.—On 31st August, the correspondent of *The Times* at Athens telegraphed that the Greek Government had applied, through the Greek Minister in London, for the services of five British Naval Officers specialists respectively in gunnery, torpedoes, aviation, signalling and staff work. No request was made for the return of the British Naval Mission as a body.

HOLLAND.

NEW CRUISERS.—The cruisers "Java" and "Sumatra," launched in 1921 and 1920 respectively, have now been completed for service in the Dutch East Indies. These vessels are of 7,000 tons, and with 65,000 h.p. are designed for 30 knots. Their armament includes ten 5.9 inch and four 13 pounder anti-aircraft guns, but they carry no torpedo tubes.

ITALY.

VISIT TO ENGLAND.—The Italian cruisers "Pisa" and "Francesco Ferruccio" visited Gravesend for eight days in August and Portsmouth during the first week of September. They were commanded by Rear-Admiral E. Burzagli.

JAPAN.

CRUISER LAUNCHED.—The third of the four cruisers of the 7,100 ton class, the "Aoba," was launched at the Mitsubishi yard on 24th September, and the fourth, the "Kinugasa," at the Kawasaki Dockyard on 25th October. The first of this group, the "Furutaka," is running trials.

NAVAL PROGRAMME.—The British First Lord announced in July, in reply to a question, that Japan had not announced any additions to her future naval programme which are not included in the Return of Fleets presented to Parliament this year. Information that the Japanese Government had definitely authorised the laying down of four of the destroyers, shown as projected on page 63 of the Return, was received after H.M. Government had reached a decision in regard to the British replacement programme.

NAVY AND AIR WINGS.—Considerable interest was taken in a discussion between General Nagaoka, President of the Imperial Aviation Association, and Admiral Kato, late Chief of the Naval Staff, recently, in reference to the respective merits of naval and aerial forces. Admiral Kato, while admitting the importance of air defence, and supporting the General's advocacy of a National Defence Council, pointed out that views which attach undue importance to aviation are harmful to the best interests of the country.

JUGO-SLAVIA.

NEW VESSEL.—A message from Belgrade states that a new vessel, built in Germany for Jugo-Slavia, and described as "the first cruiser," arrived at Cattaro early in September, and was enthusiastically acclaimed by the population. The vessel is named the "Dalmacija." The Serbs are keen on their small naval force, and an organization like the Navy Leagues of other countries, "Iadranska Straza" (Adriatic Defence), aims at making the Jugo-Slav Navy as strong and efficient as its Army. Among its educational methods is the provision of literature and lectures among the school children, and English seafaring stories have been translated for this purpose.

NORWAY.

NAVAL PROGRAMME.—According to recent reports in the press, Norway is to devote 20,000,000 Kronen to the renovation of her Navy. The small battleships "Tordenskjold," "Haarfagre," "Norge" and "Eidsvold" are to be modernised with new propelling machinery and re-armed with twelve new, long-range 6 inch guns each. New construction will be confined to flotilla leaders, destroyers, submarines and naval aircraft.

PERU.

NEW SUBMARINES.—Two submarines are reported to be under construction for Peru in an American yard. There were three under-water craft ordered from an Italian firm in 1923, but owing to lack of funds they were never delivered.

POLAND.

NEW DESTROYERS.—Two destroyers, the first of a new programme for the Polish Navy, are reported to be under construction at the Chantiers Navals Francais at Blainville, near Caen. According to statements in the Polish press in September, Marshal Pilsudski, the War Minister, had presented to the Ministerial Council a proposal to purchase for the Navy the French cruiser "Desaix," but such a sale would apparently be prohibited by the Washington Treaty.

PORTUGAL.

NEW NAVAL ARSENAL.—The Portuguese Government in September invited tenders for the construction of a new arsenal at Lisbon. The firm obtaining the contract will have the right for seventy-five years to execute the necessary work in connection with ship construction required by the Navy and Mercantile Marine.

SIAM.

NEW GUNBOAT.—The new gunboat built on the Tyne for the Siamese Navy has been completed. Hitherto, the principal vessel has been the destroyer "Phra Ruan," formerly the "Radiant" in the British Navy. The gunboat, named the "Ratnakosindr," is of 918 tons, and is armed with two 6-inch and four 3-inch anti-aircraft guns.

SOVIET RUSSIA.

BALTIC EXERCISES.—On 10th August, the Soviet Baltic Fleet left Kronstadt for exercises, and was afterwards sighted off the Estonian coast. On board the flagship "Marat" (formerly the "Petropavlovsk") was Kameneff, Inspector of the Red Army, and a member of the Revolutionary Military Council. A Riga message dated 15th September, said that the Soviet authorities attached great importance to the exercises. They were issuing special bulletins announcing developments of the "attack on Leningrad." Special meetings of factory workers were held at which the importance of the exercises and the role of Kronstadt in the defences of Leningrad were explained. Seaplanes took part in the operations.

SPAIN.

TEN YEAR PROGRAMME.—The publication on 18th July of the Supplementary Navy Estimates revealed that the total amount to be spent on vessels under construction and on new units is 877 million pesetas, to be distributed over ten and half years. Provision is made for one cruiser of "Principe Alfonso" type, to be built at Ferrol, and three flotilla leaders, of the "Churruca" type, at Cartagena; also twelve more submarines of the "C" type, and an auxiliary programme including two 7,000 ton oil tankers and three patrol vessels of 250 tons, minelayers and minesweepers. Other items in the Estimates provide for a naval flying school in Barcelona, and the establishment, with floating docks, of new naval bases at Mahon and Vigo.

NAVAL STAFF COLLEGE FLOTILLA.—On 1st July, a training flotilla was formed, composed of the destroyers "Alsedo," "Velasco" and "Lazaga" and four torpedo boats. The qualifiers at the Staff College embarked in these vessels, which are under the command of the Director of the College, and during the month of July will study defensive measures for the Spanish ports on the Mediterranean coast, including the Balearic Isles; tactics, torpedo firing, etc., will also be studied. In August, the flotilla—less the torpedo boats—visited various French and Italian ports to study the organization of foreign bases.

TURKEY.

NEW VESSELS.—In addition to the two submarines ordered by Turkey last year from a Dutch firm at Rotterdam, a third is reported to be projected. Tenders

have also been invited for five 36 knot destroyers and some 20 knot minelayers. The ex-"Goeben," now named the "Yavouz Sultan Selim," is at length to be repaired and taken into the new floating dock at Ismid, which is under construction by the firm of Flinder & Co., of Lübeck.

UNITED STATES.

NEW WARSHIP CONSTRUCTION.—The progress of the vessels under construction on 1st August, 1926, was as follows: Of the aircraft carriers "Lexington" and "Saratoga" the former was 83.6 per cent. complete, and should be finished on 1st June, 1927, and the latter was 88.6 per cent. complete, and should be finished on 1st April, 1927. Of the two cruisers of 10,000 tons, the "Pensacola" at New York Navy Yard was 0.9 towards completion, and the "Salt Lake City," at the William Cramp yard, 0.1. These vessels will not be ready until July, 1929. The progress of fleet submarines was: "V.4," at Portsmouth Navy Yard, 49.4 per cent., to be finished 1st October, 1927; "V.5," at the same yard, 1.2 per cent., to be finished 1st December, 1928; and "V.6," at Mare Island, 0.3 per cent., to be finished 1st March, 1929.

NAVY ARSENAL DESTROYED.—Serious loss of life and damage were caused on 10th July, when the U.S. Navy Ammunition Depot at Lake Denmark, near Dover, New Jersey, said to be the largest of its kind in the world, was completely destroyed by explosions caused by lightning. The country round was shaken over a wide area.

SUNKEN SUBMARINE RAISED.—The sunken submarine "S.51," which was rammed in September, 1925, with the loss of thirty-four lives, was raised on 6th July and docked at Brooklyn two days later. Every man was found at his post. The position of the periscope and the parts of the engine showed that the commander was trying to reverse the vessel to avoid a collision at the time the submarine was struck by the steamship "City of Rome."

ARMY NOTES

HOME.

REGULAR FORCES.

APPOINTMENTS AND PROMOTIONS.—His Majesty The King has been pleased to approve of the following appointments :—

Aides-de-Camp to The King : Colonel W. W. Pitt-Taylor, C.B., C.M.G., D.S.O. ; Colonel H. L. Pritchard, C.B., C.M.G., D.S.O. ; Colonel S. W. H. Rawlins, C.B., C.M.G., D.S.O. ; Colonel F. J. Marshall, C.B., C.M.G., D.S.O. ; Colonel J. C. Browne, C.M.G., D.S.O.

Honorary Surgeons to The King : Major-General H. P. W. Barrow, C.M.G., D.S.O., O.B.E. ; Major-General D. Harvey, C.M.G., C.B.E., M.D.

Adjutant General to the Forces : General Sir Walter P. Braithwaite, K.C.B.

General Officer Commanding-in-Chief, Western Command, India : Lieut.-General Sir Charles H. Harington, G.B.E., K.C.B., D.S.O.

General Officer Commanding-in-Chief, Eastern Command : Lieut.-General Sir Robert D. Whigham, K.C.B., K.C.M.G., D.S.O.

General Officer Commanding-in-Chief, Aldershot Command : Lieut.-General Sir David G. M. Campbell, K.C.B.

Quartermaster-General to the Forces : Major-General Sir W. Hastings Anderson, K.C.B.

Major-General Sir G. D. Jeffreys, K.C.V.O., C.B., C.M.G., to command 43rd (The Wessex) Division, Territorial Army ; Major-General L. C. L. Oldfield, C.B., C.M.G., D.S.O., to command 47th (2nd London) Division, Territorial Army.

Major-General Sir Frederic Mercer, K.C.M.G., C.B., to be Colonel Commandant, Royal Artillery.

Major-General E. H. Willis, C.B., C.M.G., has been appointed Inspector of the Royal Artillery.

The following promotions are announced : Lieut.-General Sir J. F. Noel Birch, K.C.B., K.C.M.G. ; Lieut.-General Sir J. John Asser, K.C.B., K.C.M.G., K.C.V.O., to be Generals. Major-General Sir William Thwaites, K.C.M.G., C.B. ; Major-General Sir Webb Gillman, K.C.M.G., C.B., D.S.O., to be Lieut.-Generals. Colonel H. R. Peck, C.B., C.M.G., D.S.O., to be Major-General.

MASTER-GUNNER, ST. JAMES' PARK.—His Majesty the King has been graciously pleased to approve of the appointment of General the Lord Horne, G.C.B., K.C.M.G., Colonel Commandant, Royal Horse Artillery, to be Master-Gunner, St. James' Park, in succession to the late General Sir Edward Chapman, K.C.B., deceased.

WEST INDIA REGIMENT TO BE DISBANDED.—The King has approved, with regret, of the disbandment of the Corps of the West India Regiment.

RETIREMENT OF GENERAL OFFICERS.—A general officer who has been promoted from a combatant corps shall in future be eligible to retire on retired pay at any time after completing fifteen years' service, subject to such retirement

being deemed expedient by the Army Council. Hitherto the rule with regard to combatant officers has been that a general or a lieutenant-general may not retire voluntarily until the age of 65, nor a major-general until the age of 60. Further amendments provide that major-generals shall be retired compulsorily at the age of 62 years, or, if so decided in any case by the Army Council, at or after the age of 60 years; and that lieutenant-generals or generals shall be retired at 67 years or, if so decided in any case by the Army Council, at or after the age of 65 years.

THE SMALL ARMS SCHOOL.—The Small Arms and Machine Gun Schools have been amalgamated under one commandant. The amalgamated schools will be known as the Small Arms School, with headquarters at Netheravon, and will consist of two wings; the Hythe Wing for rifle, light automatic, bayonet, grenade and revolver instruction; and the Netheravon Wing, for machine gun instruction.

ATTACHMENT OF OFFICERS TO R.A.S.C.—The Army Council have approved a scheme under which officers of other arms of the Service, with not less than two of more than five years' commissioned service, will be attached to the Royal Army Service Corps for a normal period of five years. Officers so attached will be eligible for permanent transfer to the Corps at any time subsequent to the satisfactory completion of the six months' probation to which all who come under the scheme will be subject. Those who elect to transfer will be transferred in the rank held at the date of transfer, and will take seniority in rank in the Royal Army Service Corps as follows: second lieutenants from the date of joining on probation; lieutenants from the date of joining on probation or the date of promotion to lieutenant, whichever is the later. Officers will not be eligible for transfer in the rank of captain.

On the termination of five years' attachment an officer must return to his regiment or corps or elect permanent transfer to the Royal Army Service Corps. In the former case he will be considered as supernumerary to his regiment or corps until such time as he can be absorbed, and will be entitled to full pay while so situated.

PROGRESS OF EDUCATION IN THE RANKS.—The results of the examination held in March for Army First Class and Special Certificates afford every indication that interest among soldiers of all ranks and corps in general education is fully sustained. Some 2,403 men presented themselves for examination—2,141 for the First Class Certificate (English, Mathematics, Geography and Map-reading) and 233 for the Special Certificate (the equivalent of the Matriculation); 5 candidates having already matriculated at a University (or the equivalent) came up for examination in Map-reading only; 22 for re-examination in order to obtain a record of "distinguished" and 2 were examined with a view to adding extra subjects to their Special Certificates.

In the result 1,180 First Class Certificates were awarded, showing 55 per cent. of successes; but the number of absolute failures was only 604, inasmuch as 281 candidates who failed in one subject only obtained a sufficient aggregate of marks to make themselves eligible for re-examination in the one subject in which they failed. Of 11 candidates who endeavoured to obtain a record of "distinguished" on certificates already won, 7 were successful; and, in all, 181 candidates secured distinction in various subjects.

Of the 233 candidates for the Special Certificate, 48 obtained certificates and 136 made some progress towards success by passing in some of the required

subjects. Only 43 failed altogether. Of 11 who endeavoured to secure a record of "distinguished" on previously won certificates, 5 were successful. The results are satisfactory as a whole and not only is the number of certificates completed larger than in the previous examination, but the proportion of candidates who passed in one or more subjects indicates probable further increase in the near future.

First Class Certificate Papers.—The report of the examiners indicates that the favourite subject is English, while Map-reading provides the principal stumbling block. As regards English, "the general standard of writing, the relatively small number of definitely illiterate papers and the obvious intelligent appreciation of the set books unmistakably show how interest in this subject has been widened and deepened in the last four years. . . . Although inevitable defects in composition, writing and, in a diminishing degree, in spelling, continue to be seen in the worked papers, there is encouraging evidence of the undoubted formative value of the reading involved in the soldier's study of English. The ideas offered by him in his essays and in his appreciation of character and conduct, as represented in the historical novels, clearly reveal that the foundations of right judgment, a just appreciation of strength and weakness in conduct and a lively sense of humour are the fruits of his reading."

In Geography, good maps were produced by some of the candidates, but the general standard of map-drawing was somewhat low.

Special Certificate Papers.—In English, "the worked papers," say the examiners, "showed a definite superiority in general quality compared with the first class papers. Much of the work was interesting and pleasant to read. Knowledge of the text of the plays and poems was better than the ability of the writers to express their views, but there was ample evidence of careful teaching and study and a fair appreciation of the literary quality of the texts." The comments upon the defective sentences showed not only a grasp of the rules of correct writing, but often a quick sense of humour, which in one candidate deserves honourable mention. "It must have been," he wrote, by way of comment on a sentence concerning the rarity of the white elephant, "an interesting animal, this white elephant with a black future; such a creature must undoubtedly have had a purple past."

TERRITORIAL ARMY.

RECRUITING.—Official returns issued 24th August, show that during July 2,872 recruits were finally approved for service in the Territorial Army, and that the total Territorial strength, exclusive of permanent staff, on the 1st August was 148,099. The strength of the Divisions is as follows:—

Northumbrian, 9,852; North Midland, 9,596; West Riding, 9,524; Highland, 9,518; Welsh, 9,287; East Lancashire, 9,182; Lowland, 9,134; South Midland, 8,502; East Anglian, 8,422; West Lancashire, 8,371; Wessex, 8,242; 56th (1st London), 7,392; Home Counties, 7,106; 47th (2nd London), 6,396.

The numbers still required to complete the Peace Establishments of the various units are 1,245 officers and 32,797 other ranks.

THE DOMINION FORCES.

REGIMENTAL ALLIANCES.—His Majesty The King has approved of the following regimental alliances:—

Non-Permanent Forces of Canadian Militia.—The Princess of Wales' Own Regiment to the Prince of Wales' Volunteers (South Lancashire Regiment); the

Essex Fusiliers to the Essex Regiment; the St. John Fusiliers to the King's Own Scottish Borderers.

Australian Military Forces.—The 16th Light Horse Regiment to 16/5th Lancers; the 22nd Light Horse Regiment to the 9th Queen's Royal Lancers; the 16th Battalion to the Bedfordshire and Hertfordshire Regiment.

New Zealand Forces.—The New Zealand Corps of Signals to the Royal Corps of Signals.

Union of South Africa Active Citizen Force.—The 1st Infantry (Durban Light Infantry) to the Rifle Brigade (Prince Consort's Own).

FOREIGN

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GERMANY.

THE WAR OF THE FUTURE AND MOTORISATION.—The following is a précis of an article which appeared in "Wissen und Wehr," Volume V, 1926.

Introduction.—The writer quotes the final words of Napoleon's orders for the operations against Regensburg, "activité, activité, vitesse." Rapidity of movement has in past wars depended almost exclusively on the marching capacity of men and horses. The World War first demonstrated the value of the motor vehicle in the air, on land and on sea, but motorisation was not developed far enough to enable full use to be made of its possibilities.

The World War.—The World War began by the assembly of troops on the frontier by railway, screened by frontier guards. This assembly took place according to a definite plan worked out in peace. Strategic reconnaissance was carried out by army cavalry assisted by almost negligible quantities of aircraft. The pace of all operations was set by the infantry. Supply was carried out by rail and horse transport, assisted, to an increasing degree as the war proceeded, by mechanical road transport.

At the end of 1914, for the first time in history, the French employed mechanical transport for the movement of troops (Paris taxis). In the further course of the war, army cavalry became increasingly unimportant, its functions being performed largely by aircraft. The employment of mechanical transport road vehicles for troops and supply, although generally recognised, was not developed to any large degree, chiefly owing to shortage of vehicles and their dependence on good roads. Guns on motor mountings and aircraft gradually began to take an active part in the fighting. Dirigibles were first employed owing to their large cruising radius, and then discarded owing to their vulnerability. About the middle of the war, the tank, a first-class offensive weapon and a technical masterpiece, was evolved. Consequently, although the World War provided many effective precedents for motorisation, operations and tactics remained essentially dependent on the marching speed of man and horse.

The War of the Future.—Just as after the war of 1870-71 general attention was directed to the extension of railway systems, the post-World-War period has been devoted to the study of the mechanical vehicle in the air, on land and on sea. A

war to-day between two well-equipped states would include, in addition to the deployment of strong aerial forces, the transport of a large part of the artillery, the majority of specialist troops and of supplies by means of mechanical transport.

Developments continue. There will soon be motor-lorries capable of travelling across any country which is passable to horsed vehicles. The time will come when the mechanical vehicle will be superior to the horsed vehicle in cross-country work. Road construction in all states will be adapted to the mechanical transport vehicle and the problem of fuel supply for a war will be solved. There is no doubt that such developments will, in time, reach a point where it will be possible to transport, by mechanical methods, the entire fighting forces to the battle area. This development, will, however, take time and it will cost money for any state completely to motorise its present army. There is no doubt, however, that present developments tend in this direction. The ensuing observations are, therefore, only applicable to a period some decades hence.

The Troops of the War of the Future.—There will be no more army cavalry. Strategic reconnaissance will be performed by aircraft. Fighting tasks, hitherto performed by army cavalry, will be undertaken by fast tanks and armoured cars, accompanied by infantry on bicycles and silent motor-bicycles. The entire strength of each division, including ammunition and supply columns, will be carried to the point of deployment by mechanical transport. Infantry battalions, artillery batteries, &c., will be simultaneously self-contained mechanical transport units. Horses will only be employed for divisional cavalry squadrons (mounted orderlies), for senior officers and for staffs and will, as a rule, also be carried to the point of deployment in mechanical transport vehicles. Man-carrying and divisional supply vehicles will not be restricted to roads, but will be able to move across country. Larger formations (corps and army) will, in addition to the normal corps and army troops (also motorised), dispose of special tank formations, gas troops and numerous road and railway construction units.

On the lines of communication, railways will be used as far forward as possible. From rail-head motor lorries will be used.

March depths of fighting units will remain much the same, but the marching speed will be approximately trebled.

Gas will be a particularly important weapon and will be dropped from aircraft, fired by artillery and trench mortars and employed by special gas troops in concentrated form for the "flooding" of sections of country.

Mountain warfare will still, to a large extent, be dependent on the pack animal. In such warfare aircraft will be of particular value as a means of communication and a method of transport of both men and material.

Course of the War of the Future.—The World War has shown that modern war is not restricted to the annihilation of the enemy army. The entire people, the economic system and all sources of power are involved. The victory is won by the nation which first breaks the "will to war" of the enemy people. The war of the future will probably begin without a declaration of war, with the invasion of enemy territory by strong air forces, which will execute bombing attacks on important traffic centres and on military and economic sources of supply and power.

Mobilisation and assembly by rail and mechanical transport will be completed in a shorter time than heretofore and will not only be covered by Frontier guards but also by a screen of aircraft. In the case of the stronger Power, assembly will immediately merge into invasion, since the repulse of the enemy and the thrusting back of his aerodromes will be the best guarantee against attack from the air.

The speed of operations will depend on the efficiency of the mechanical transport at disposal. The weaker belligerent will be able, by carefully systematised devastation and by "flooding" definite areas with gas ("Gas swamps") to create more favourable conditions for his operations by restricting his opponent to certain definite lines of advance. The tactics of the defender will then consist of rear-guard actions preceded by a series of surprise concentrations at various points along the line of battle. The attacker, on the other hand, will push forward with the utmost speed and will employ his aircraft to the greatest possible extent over the enemy hinterland.

If the enemy army is kept in retreat and if the major portion of unoccupied enemy territory is exposed to aerial attack by superior forces, surrender will soon follow, unless assistance is speedily forthcoming from a strong ally. If such assistance is forthcoming, a further phase of the conflict between motor and motor will set in. Submarines and aircraft will attack enemy sea transports and aircraft will continually harry transport by land.

Influence of Motorisation on Operations.—Aircraft, of all mechanical vehicles, exercises the greatest influence on the conduct of war. This influence is not only due to the large radius of action but is chiefly to be attributed to the quality of the aeroplane as an armed carrier of news and men, and as a fighting weapon. Aircraft can achieve artillery effect over distances of hundreds of kilometers and therefore functions as the "long-range gun" of the higher command, with the added advantage contained in the fact that its projectile is directed by human intelligence to within a very short distance of the target. Dirigibles are, owing to their vulnerability, useless in land warfare, but will probably still be used at sea where great distances are to be covered. It is entirely possible that the vulnerability of dirigibles may be reduced by filling them with non-inflammable gas and by equipping them with protective aeroplanes for defensive purposes.

At the beginning of the war, towns in the territory of belligerents will be particularly subjected to air attacks. All institutions directly responsible for the maintenance and supply of military and economic power should be immediately withdrawn into the interior, and "deployed" over large areas in order to reduce the size of targets for enemy aircraft. Gas protection for the home population is just as necessary as it is for the army and will become more and more necessary as the difference between "front" and "home" decreases.

The enormous demand for mechanical transport vehicles on the outbreak of war will have to be covered to a certain extent from civilian sources. For this purpose, in peace, mechanical transport firms will have to be encouraged and, if necessary, subsidised to produce types easily adaptable for military purposes. The same principle will apply to aircraft and commercial shipping.

Permanent Fortifications.—As time goes on, permanent fortifications will become less and less effective and will probably be replaced by "gas swamps," which will have the great advantage of being easily and quickly laid in areas hitherto unsuspected by the enemy.

Mobilization.—Mobilization will be facilitated by the employment of large quantities of mechanical transport. Air attacks on large garrisons will make it essential to employ, as mobilization centres, a large number of small and remote locations, which have hitherto been unoccupied by troops.

Mobilization of aircraft and anti-aircraft troops must be carried out with the utmost despatch and be complete within a few hours of the ordering of the general mobilization, and will best be centrally directed.

The opinion that future wars will be decided by aircraft alone is, however wrong. Complete command of the air is, in view of the space to be covered, impossible.

Assembly.—Assembly of mobilized forces will, in the future, like mobilization, be peculiarly susceptible to attacks from the air. All efforts will be made to shorten the period necessary for the assembly, which cannot be done away with and which, therefore, remains an unfortunate but necessary evil. Nevertheless, the three hitherto entirely separate phases—*i.e.*, mobilization, assembly and advance—will, in the future, overlap to an increasing degree. Assembly is no longer the monopoly of the railways, and large portions of the motorised army will reach its rendezvous under its own power. This is all the more necessary in view of the fact that the railway, especially in frontier areas, is no longer a certain method of transport, since all main stations, junctions, etc., will afford excellent targets for enemy aircraft. This disburdening of the railway will give the authorities a freer hand to dispose of it for other purposes, and will make the assembly a much more elastic process than it has been hitherto, when the slightest mistake or weakness in railway organization could do an immense amount of harm to the plans of the higher command. In this connection the electrification of the railways has little military value, as power stations will be subjected to attacks from the air, as will the connecting lines between these stations and the railway itself.

Mobility and elasticity of assembly will further enable raids and local attacks to be executed with the object of upsetting the enemy's assembly. Aerodromes will be pushed forward in order to increase the depth of air attacks on enemy territory. This measure may, of course, compel the assembly to take place further in rear of the frontiers than has hitherto been the case. This disadvantage will, however, be more than compensated for by the mobility of the land forces.

Moltke's dictum that "a mistake in the original assembly of the army can scarcely be made good in the course of the whole or rest of the campaign" will lose a great deal of its strength. Modern obstructions, such as deliberately devastated areas, floods and "gas swamps" will, in a great many cases, only become known to the other side in the course of the assembly itself and may, therefore, lead to sudden changes in the organization of this process and in the plan of operations. Such changes will be more and more easily carried out as mobility increases. Until the first collision with the enemy, Moltke reckoned on the assembly taking place according to plan, and only admitted the employment of a "system of improvisations" after it had been completed. In future wars the system of improvisations will be employed from the beginning of the assembly.

In short, the mechanicalization of movement of troops will not, as many believe, bring about a mechanicalization of leadership and a preponderance of the technician, but will actually bring about the very opposite. The mobile instrument will make greater claims than ever on the art of leadership which only the real military artist will be able to satisfy. The influence of the leader on the course of events will be greatly increased. Telephone, telegraph, wireless, aircraft and mechanical land transport will ensure rapid communication of his orders. His task will be to double the fighting value of his troops by the fullest exploitation of their mobility.

The Advance.—The assembly will merge rapidly and almost imperceptibly into the advance. As a rule the advance will take place as far as possible by night. Divisions marching by day will be split into several march groups at large intervals and distances from one another. The breadth and depth of the strategic advance

can be increased on account of increased mobility. Moltke said that "Strategy has done its best if the troops arrive on the day before the battle within a day's march of the point of contact with the enemy." This statement remains true, with the difference that, in the future, a day's march will not be 20 kilometers but 200 kilometres. Whilst, in the past, an enveloping movement had to be begun in the course of the advance, thus disclosing intentions to the enemy, increased mobility will, in the future, enable the military leader to begin his enveloping movement immediately before the battle proper.

The formation for the advance of the future will, therefore, be a broad front with strong forces in the second line behind the centre, which will involve an initial frontal contact with the enemy, from which a single or double envelopment or a break-through can be undertaken by the concentrated mobile forces of the second line. Pressure on the flanks, envelopment and encirclement (*Einkreisung*) will still be the eternal methods of destroying the enemy. The tactical break-through, however, will be made more difficult in the future, since the narrow gap in the enemy line will restrict the use of mechanical transport, whilst the enemy will have a large degree of freedom in the employment of his motorised forces.

Strategic reconnaissance during the advance will be undertaken by aircraft and tactical reconnaissance by the land forces.

The Battle.—The battle will develop from the advance of one or both opponents and it is here that the tactical effect of mechanical transport will be experienced. Two evenly-matched opponents in a war of the future, will undoubtedly try to achieve a rapid decision by a sudden declaration of war and a swift delivery of the first blow. Any attempts to evade the enemy forces will involve the relinquishing of too much territory, and will only be effective if performed in connection with deliberate devastation of large areas of the home country, which no state would willingly undertake except under extreme pressure.

The first battles will, therefore, probably take place in the immediate neighbourhood of the frontier. The lapse of time between the first contact and decision will probably not be shorter than in the past. This fact, together with the fact that the mobility of all forces will have been greatly increased, will enable the battle to be fought by both sides on a deeper front and will further permit the maintenance of reserves at a greater distance from the battlefield than has hitherto been practicable. As in the past, the attacking party will have the advantage over the defender inasmuch as the former will still retain the initiative. The effects of an envelopment will be greatly increased by mobility. Surprise concentrations of superior forces on the flanks of the enemy, the despatch of small detachments with guns by air to his rear and raids by armoured car detachments on his flank and rear, will probably be the most effective methods of attack. One night will be enough to move strong reserves distances of 100 kilometres and more, thus retaining the initiative. Aircraft and tanks will be employed in the battle directly as mechanical weapons. Aircraft will not be a decisive factor, but can, by feint concentrations and other methods, do much to assist the plans of the higher command.

The employment of tanks in mass was very successful during the late war. Their effect is, however, like that of aircraft, more a moral than a destructive one. The war of the future will involve the employment of tanks in large numbers, more particularly in view of the fact that gas-proof tanks will be able to pass through gas clouds and swamps with impunity. The tank will always remain a weapon of attack and will only be employed in the defence for counter-attack purposes. In

the latter case, the employment of tank *versus* tank is not impossible. There is no doubt that anti-tank methods will be greatly developed and extended, and it is, therefore, probable that the attack will begin by an infantry advance supported by artillery and aircraft, and that the tank will only be employed when the infantry have reached the limit of the support of their artillery and the enemy defensive system has already been disorganized.

An undirected battle, such as was the Battle of the Marne in 1914 on the German side, is never likely to take place again.

Pursuit.—Present theory prescribes pursuit of a beaten enemy to the last gasp of man and horse. It might be thought that a motorised force would find it easier to pursue on account of its mobility. This, however, is not the case. Mobility is a greater asset to the retiring than to the pursuing force. The latter will, of course, send bombing aircraft to important points in rear of the enemy lines and will form mobile pursuit columns. Nevertheless, as long as the retreating force disposes of reserves it will be able, by the skilful employment of its vehicles, continually to oppose the pursuer's special pursuit columns by fresh troops. The best cover for the retreat will be deliberate devastations and the preparation of other obstacles which will hold up the pursuer more and more, until finally, the superior mobility, and with it, the initiative, will once more pass into the hands of the retiring force. There is no doubt in this connection that it will be easier to fight in one's own country and that this factor can exercise a great influence on the ultimate decision. This was already shown to a certain degree by the French operations before the battle of the Marne.

From this point of view it would appear that a war on two fronts would be made more easy in the future. Rapid shifting of troops from front to front assisted by their mobility, would give the possessor of interior lines an added advantage. This advantage, however, is more than discounted by the air factor. A war of two fronts would involve, for the country waging it, the exposure of home territory to air attacks on two sides, and preparation for such a war would, therefore, involve the formation of an air force at least equal in strength to the sum total of air forces which might be employed against it. Only an air force of such strength could hope to maintain a successful offensive over enemy territory.

Guerilla Warfare.—The opinion is frequently heard that a motorised army is peculiarly sensitive to guerilla warfare. There is no doubt that raids and similar operations on a small scale can do much to impair mobility. Such raids can have an important effect on a campaign, but only as long as the raider's main army is successfully holding its own against the army of the raided.

The position is entirely altered if the raider's army has been beaten and the enemy has sufficient forces to employ, in suppressing guerilla warfare, the continuation of which then becomes impossible. The odds are too uneven. Mobile columns patrol all territory involved, aircraft, unimpeded by any serious opposition in the air, can proceed at once to any given point and the bombardment from the air of large enemy towns can be undertaken as reprisal for every guerilla operation. Armoured trains may also be employed to patrol the railways. Another factor militating against the guerilla leaders is the fact that the main war is no longer being conducted by the army and that, therefore, the civilian population is completely at the mercy of the raided army.

A rising "en masse" of the civil population after the defeat of the army, such as took place in France in 1870, will scarcely be possible in the future.

Supply.—Although mechanical transport will be of the utmost importance for the maintenance of supply, the bulk of this work will still be performed by ship and railway, which will have to cover the great distances between home areas and the area of operations. Whilst, however, in the past, operations seldom took place at distances of more than 100 kilometres from rail-head, this distance will, in the future, be increased. Mechanical transport columns will carry their loads from rail-head at approximately railway speed to the troops. Road construction units will prepare the way through the devastated areas and railway repair construction will be executed more rapidly than hitherto.

Naval Warfare.—The battleship, which was already threatened during the late War by the submarine, has now new and dangerous enemies in airship and aeroplane. Increase of speed, the construction of bomb-proof shipping and the equipment of large ships as aircraft carriers will be employed as counter-measures. Operations at sea will, in the future, like operations on land, be undertaken of necessity in close co-operation with the air fleet.

Conclusion.—The foregoing remarks only apply to a war between two approximately equal opponents. It is unnecessary to point out that a country which is not in a position to adapt its army to technical developments cannot alone conduct a successful war against an army equipped with modern weapons. On the other hand, technique and material should not be over-estimated in war. The art of war is subjected to never-changing laws, one of the most important of which is that the moral of the army, its discipline and patriotism, its readiness for sacrifice and its will to fight, form the foundation of victory. The finest technique in the world will not be able to alter the fact that it is the human being who serves the machine in war, and that the machine can only produce its highest performance at the command of the will and moral of the human being. Still, nothing more rapidly destroys the value of troops than their employment inadequately armed against a heavily armed opponent.

ITALY.

CO-ORDINATION IN ADMINISTRATION OF THE ARMED FORCES AND OTHER SERVICES OF THE STATE.—I. *Policy.*—In pursuance of their policy to develop co-operation between the various armed forces, and to encourage economy in the various Government services, the Italians have turned their attention to co-ordination of the Commissariat services, especially as regards the provision and distribution of "supplies," which term covers victuals, clothing, equipment, bedding and fuel.

2. *The Forces and Services Affected.*—The Army, Navy, Air Force, Customs Guards, National Militia, Prison Service, Port and Harbour Service, Forest Department, and other similar departments and services.

From which it will be seen that the attempt at co-ordination is not limited to the three fighting forces, but aims at the inclusion of all Government services.

3. *Machinery.*—The machinery to be employed for the achievement of this aim is :—(a) A Special Purchasing Commission ; (b) An Inspection Commission ; (c) Contracting Administrations.

4. *The Special Purchasing Commission.*—This, established at the Ministry of War, consists of representatives from each of the interested forces and services, and of a representative from the Ministry of Finance.

Its duties are to meet once a year, or more often if required, to decide on the quantity and quality of the "supplies" required, and on their allotment and

distribution. Then, to decide which of the various forces or services is the largest consumer of each particular type of supplies. Finally, to detail the "individual administration" of that force or service, as the "contracting administration," to arrange for the purchase and distribution of that type of supplies to all the various services.

It retains certain powers over the "contracting administrations" which are given below.

It is also responsible for the issue of instructions regarding warehousing and for the submission of proposals likely to simplify the working of the system.

5. *The Inspection Commission.*—This consists of representatives of the armed forces and of technical experts from the various "individual administrations," and may, if it wish, also co-opt technical experts as representatives of contractors.

Its duties are to inspect and approve, or otherwise, the various supplies purchased by the "contracting administrations," and it works in conjunction with the "Purchasing Commission."

6. *The Contracting Administrations.*—Up to now each force and service has had its "individual administration." These are retained but are made subordinate to the "Purchasing Commission." Each of these "individual administrations" becomes in turn a "contracting administration" for one or more particular type of supplies, in accordance with the wishes of the "Purchasing Commission," in the manner described in paragraph 4 above. When an "individual administration" is detailed by the "Purchasing Commission" as a "contracting administration," it becomes responsible for the purchase and distribution of that type of supplies to all the various forces and services.

A "contracting administration" has full liberty of action as to the time of purchase, choice of market, price, and all other conditions of purchase; except that—

- (a) The "Purchasing Commission" may direct that the contract shall contain special terms by which other administrations shall be empowered to satisfy themselves that their requirements are being properly met;
- (b) Samples and price lists must be submitted to the "Purchasing Commission" for its approval;
- (c) In case of emergency any "individual administration" may purchase its own supplies, but must notify the "Purchasing Commission" and the "contracting administration" of such action.

7. *Payment.*—Although the "contracting administration" arranges the contract for "supplies," arrangements exist by which each individual administration will pay for its own share of supplies.

8. *Local Contracts.*—The drafting of contracts for local supplies, and the duty of supervising the execution of such local contracts, may be delegated by the "contracting administration" to local directorates or representatives, but the method of making and paying for these local purchases remains the same as for a general contract, i.e., the local representative of the "contracting administration" carries through the contract and distributes the supplies, but each local branch of the various individual administrations pays for its share.

9. *Warehousing.*—Whilst remaining under the jurisdiction of the individual administration to which they belong, warehouses may be used in common by all

the various individual administrations who may have troops or detachments located in the neighbourhood, each administration providing its own personnel to look after its share of the "supplies." Instructions to this end are issued by the "Purchasing Commission."

SOVIET RUSSIA.

THE MILITARY ACADEMY.—On 10th July, 280 persons passed out of the Red Military Academy (see JOURNAL of the R.U.S.I. for August, 1926, pp. 463-477, and 633-4). Of this number 94 had gone through the standard three years' course, whilst the remainder had undergone an eight months' "finishing" or "short" course. This is known as "K.U.V.N.A.S.," initials standing for Russian words meaning "course for perfecting the superior commanding staff."

About ten of the latter have passed through the section of Oriental studies.

This is the sixth batch of staff students who have passed out for the Red Army, and the fifth batch of those doing the "short" courses.

In future these "short" courses are to be reorganized on a two or three month basis, and will serve merely as refresher courses for officers who have done the standard course.

On 24th July, forty-eight political officers were passed out of the Tolmatchev Military-Political Academy in Leningrad on completing a four years' course. All are described as being Red Army veterans of not less than five years' service, while fifteen per cent. are "pre-October" Communists and sixty-nine per cent. are of the worker class. Except for a few who will require a course of practical training, all will enter immediately in their duties as divisional political commissaries, commissaries or lecturers at higher educational institutions, regimental commissaries, etc.

This is the first batch of "political-worker-academicians," since the V.T.A.P. (Military Political Academy of Tolmatchev) has only recently attained to its present dignity. It began with six weeks' courses. Now it is "the only higher military-political-educational establishment in the Union, working on the theoretical side according to the programmes and aims of the Communist universities," and already among the Communist universities it occupies one of the foremost places.

The "Krasnaya Zvezda" mentions some of the qualifications which the political worker in the army is required to possess. He must be able to "reply to the continual enquiries of the red soldier, must understand all the processes in the development of our economy, must comprehend all the features of the international situation, must know how to get his bearings quickly in party questions and set a correct party course, must understand military matters and be *au courant* with military progress, must not be behind the executive officer in development, must know how to use his authority as the senior party comrade in conditions when he has to win his position as such by his own conduct and ability to assert his authority."

AIR NOTES

ROYAL AIR FORCE.

APPOINTMENTS AND PROMOTIONS.

The undermentioned officers were promoted with effect from 1st July, 1926 :—

Group Captain to be Air Commodore.—James Louis Forbes, O.B.E.

Wing Commanders to be Group Captains.—Henry Meyrick Cave-Brown-Cave, D.S.O., D.F.C.; Alfred William Iredell.

The undermentioned appointments have been announced :—

Air Vice-Marshal Sir W. G. H. Salmond, K.C.B., K.C.M.G., D.S.O., as Air Officer Commanding, R.A.F. in India, to take up appointment during January, 1927.

Air Vice-Marshal Sir E. L. Ellington, K.C.B., C.M.G., C.B.E., as Air Officer Commanding, Iraq, to take up appointment during November, 1926.

Air Vice-Marshal Sir J. F. A. Higgins, K.B.E., C.B., D.S.O., A.F.C., as Air Member for Supply and Research, to take up appointment during November, 1926.

Air Vice-Marshal C. A. H. Longcroft, C.B., C.M.G., D.S.O., A.F.C., as Air Officer Commanding, Inland Area, November, 1926.

Air Vice-Marshal T. I. Webb-Bowen, C.B., C.M.G., as Air Officer Commanding, Middle East, November, 1926.

Air Commodore A. E. Borton, C.B., C.M.G., D.S.O., A.F.C., as Director of Personal Services, Air Ministry, November, 1926.

Air Commodore F. C. Halahan, C.M.G., C.B.E., D.S.O., M.V.O., as Air Officer Commanding, Cranwell, October, 1927.

The undermentioned appointments have been made during the past quarter :—

Group Captain E. D. M. Robertson, D.F.C., to command R.A.F. Base, Gosport.

Group Captain P. B. Joubert de la Ferte, C.M.G., D.S.O., for duty as Instructor at the Imperial Defence College.

Group Captain A. B. Burdett, D.S.O., to Air Ministry, as D.D.O.

Group Captain R. P. Mills, M.C., A.F.C., to H.Q., India: Air Staff duties.

R.A.F. STAFF COLLEGE.—Air Ministry Weekly Orders of 7th October, give details of the arrangements for R.A.F. Staff College Courses and Qualifying Examinations, also the latest Regulations for the entry of students to the College.

DOMINION NOMINATION.—On the recommendation of the New Zealand Government a New Zealand candidate has been nominated for a cadetship at the R.A.F. Cadet College, Cranwell, and joined the College in the beginning of September. This is the first candidate recommended by the New Zealand Government.

PAY OF FLIGHT CADETS.—As from the beginning of the Winter Term, 1926, a flat rate of pay of 7s. a day came into force for Flight Cadets at the Royal Air Force Cadet College, Cranwell. This rate of pay replaced the old rates of 5s. a day during the first year of the course and 10s. a day during the second year, and has been devised to obviate the necessity of providing pocket money by parents to meet the expenses of Flight Cadets during the first year of his course.

NAVAL CO-OPERATION.

FLEET AIR ARM AND COASTAL RECONNAISSANCE UNITS.

IN HOME WATERS.—The flights embarked in H.M.S. "Furious" have been employed in the usual programme of training and routine exercises. The landing ground at Novar has been temporarily re-opened as usual for this purpose.

No. 480 (Coastal Reconnaissance) Flight, equipped with Southampton flying boats, have carried out several very useful submarine and patrol exercises in the Channel. This flight, in July, undertook an entirely independent cruise, leaving Calshot on 12th July and returning on 31st July.

The following places were visited on the outward journey: Falmouth, Pembroke Dock, Lough Neagh (Ireland), Cambeltown; and on the homeward flight the route was Loch Ryan (Scotland), Pembroke Dock, Falmouth, Scilly Isles, Calshot. Moorings were arranged at each port of call and supplies of fuel and oil were provided by lighter at certain places. No other assistance of any description was given. On three nights all of the members of each crew slept on board the flying boats; during the remainder of the cruise, one officer and two airmen slept aboard each aircraft, the other officer and airman sleeping ashore.

It was found that, while it is perfectly feasible for large flying boats to operate independently, the cramped conditions naturally make cooking somewhat difficult, while lack of facilities at present lead to a certain waste of time in refuelling.

A flight to Aboukir and back by two Southampton flying boats from Felixstowe was successfully completed on 30th July. During the cruise of nearly 7,000 statute miles, no trouble was experienced with either aircraft or engines. The time-table was rigidly adhered to, with the exception of one day's delay at Berre, caused by a Northerly gale.

Constant W/T communication was maintained throughout the flight with R.A.F. bases and other stations.

IN MEDITERRANEAN WATERS.—The flights embarked in H.M. ships "Eagle" and "Hermes" have carried out their usual summer programme of training and exercises with the Fleet.

At the end of September, H.M.S. "Eagle" returned to the United Kingdom to re-commission, and H.M.S. "Hermes" left the Mediterranean on temporary attachment to the China station.

No. 481 Flight at Malta (equipped with Fairey 3.D seaplanes) have co-operated with the Naval and Military units stationed at Malta and have continued their normal routine of training and exercises.

ARMY CO-OPERATION.

Owing to the General Strike many earlier camps of the Territorial Army were cancelled, in addition to the arrangements for the divisional training of the Regular Army in the New Forest and Dorsetshire. This change in plans was reflected in the work of Army co-operation squadrons during the summer; in few exercises was the strength of the troops engaged greater than one brigade, and there were practically no opportunities for bombing or fighter squadrons to be employed profitably. Thus, attention had to be concentrated upon minor operations and

more care could be devoted to details such as the form in which reconnaissance reports from the air are rendered.

Last year, owing to Army manoeuvres and to the importance of the training which led up to them, it was not found possible to arrange any co-operation with the Northern and Scottish Commands. This year a detachment from No. 13 (A.C.) squadron provided air observation for the artillery at Buddon practice camp and took part in the more important exercises in the Catterick training area; it also co-operated in the work of the Officers' Training Corps in camp at Strensall.

As in previous years, army co-operation squadrons were made available for nearly all the camps of the senior and junior divisions of the O.T.C. and a number of cadets from the camps at Mytchett Farm and Tidworth Park and Pennings visited a R.A.F. aerodrome and were given a short flight.

An advance was made in the co-operation of aircraft with coastal artillery and the flight stationed at Eastchurch for work with the Coast Artillery School provided air observation for the practices fired by the batteries in the Isle of Wight.

Co-operation with anti-aircraft defence units was provided by squadrons of the Air Defences of Great Britain. In addition, to the squadron detailed for work in conjunction with the anti-aircraft artillery practice camps at Watchet, co-operation was provided for the searchlight companies of the Territorial Army during their training camps at Manston and Newcastle.

OVERSEAS COMMANDS

ADEN.

During May, the Aden Flight, at the request of the Government of Somaliland sent a formation of three aircraft from Aden to Somaliland in order to take part in a demonstration flight over Zeyla, while the Governor was holding a conference of Somaliland notables.

On 26th May the Aden Flight was visited by Lieutenant-General Sir Andrew Skeen, K.C.B., K.C.I.E., C.M.G., Chief of the General Staff of India.

INDIA.

An interesting flight from Quetta to Madras and return was accomplished by aircraft of No. 28 (A.C.) Squadron. The Flight left Quetta on the 20th January, and after visiting Jacobabad, Hyderabad, (Sind) Uterlai, Jodhpur, Ahmedabad, Deolali, Aundh, Sholapur, Bellary, Bangalore and St. Thomas' Mount, Madras, returned by the same route to Quetta, arriving there on the 25th February. The total distance covered was approximately 4,100 miles and the total flying time for the travelling flights was fifty-four hours per machine.

At Madras a considerable amount of Army co-operational training was carried out and the Flight took part in the Naval, Military and Air Force Tournament.

IRAQ.

SULAIMANIYAH.—During June, Kerim Fattah Beg made further overtures for submission, failing the acceptance of which he proposed to create further trouble. No notice was taken of these overtures, however, as he had already been informed that the Government would accept nothing but unconditional surrender. On the night of the 22nd June he attacked the village of Qaratamur with eighty followers

The village offered a stout resistance and succeeded in driving off and dispersing the raiders. In the fighting which took place, Kerim Fattah Beg was severely wounded and on 2nd July it was confirmed that he had died of his wounds. From the early days of the British occupation Kerim Fattah Beg has been one of the most consistently anti-British and anti-Government outlaws in Kurdistan. He was disaffected in 1919, and in June, 1922, he murdered Captain Bond, the Assistant Political Officer at Chemchemal and Captain Makant, in particularly treacherous and brutal circumstances. He became closely allied with Shaikh Mahmoud on the latter's return to Sulaimaniyah in 1922, and from that time until a few weeks before his death, had actively assisted in all operations undertaken by that Shaikh.

During a reconnaissance on 14th June, while co-operating with the column supporting the Jaf migration, a machine of No. 30 (Bombing) Squadron was compelled to land at Masun behind a range of hills occupied by the rebels. The pilot—Flying Officer Denny and his passenger, L. A. C. Hirst, were captured by Shaikh Mahmoud and taken to Persia. They were well treated and have since been released.

As a result of the active hostility of a number of small villages between Penjvin and Halabja in rendering support to Shaikh Mahmoud while attacking the Penjvin Column, the column was moved to Khurmali on 24th June, and punitive operations were carried out against these villages by ground forces with air co-operation. Defences have been constructed at Khurmali, and the Halabja garrison has been removed there. An aerodrome has also been established at Khurmali.

NORTHERN IRAQ.—The position now appears to be stabilised.

SOUTHERN IRAQ.—A fighting tower, situated at Hachamah, eight and a half miles north of Samawah was the scene of a certain amount of unrest during May and June. The tower which dominates the whole of the Jarib tribal lands has on several occasions been the cause of serious tribal fighting, and orders to destroy it have repeatedly been ignored. Following an attack by the occupants of the tower on other members of the Jarib it was decided to enforce the jurisdiction of the Government. A force of police supported by a flight of four machines of No. 8 (Bombing) Squadron accordingly proceeded from Diwaniyah. The unconditional surrender of the occupants of the tower was achieved without recourse to air bombing, and the tower was destroyed by the police on the following day. It is proposed to establish a police post at Hachamah at an early date.

ARMoured CARS.—On the 22nd June, an attempt was made to re-open the track, recently destroyed by floods from Hinaidi to Basra. Two Rolls-Royce armoured cars progressed as far as Kut and two armed Fords managed to reach Sanniyat, but owing to the action of the floods further progress along the track was rendered impossible, and the whole convoy returned to Hinaidi the following day.

PALESTINE AND TRANSJORDAN.

Fighting in the Jebel Druze and in the neighbourhood of the Transjordan-Syrian frontier continued during May. Daily aeroplane reconnaissances are still being carried out along the frontier. The situation is quiet.

ARMoured CARS.—A reconnaissance of Southern Palestine was carried out by armoured cars and tenders of No. 2 Armoured Car Company. The cars left Ramleh on 14th May and proceeded to Akaba, where the landing ground was made serviceable. During the reconnaissance co-operation with aircraft was maintained. The convoy returned to Ramleh on 29th May.

BRITISH CIVIL AVIATION

CAIRO-KARACHI SERVICE.—As previously mentioned, Imperial Airways, Ltd., have accepted a contract to operate a fortnightly service between Cairo and Karachi via Baghdad, and it is now hoped that operations will commence on 1st January, 1927. It was decided not to bring the line further West at present in order to avoid the international and climatic difficulties of Europe until commercial air transport has developed a little further, while at the same time the selection of Cairo as the terminal makes possible a connection with two excellent and punctual European steamship lines: the P. & O. and the Lloyd-Triestino.

Although the contract demands only a fortnightly service, there is little doubt that a weekly service will quickly prove to be an economic necessity, and after that it is reasonable to hope that a twice-weekly service connecting with both the steamship lines will soon follow. In the contract four days is allowed for the journey of 2,500 miles between Cairo and Karachi. It is proposed, however, to shorten this time considerably, and as soon as some experience has been gained on the working of the route, a night-flying section will be established, probably in Iraq, and the voyage should be reduced to about thirty hours. The service is to be operated with a fleet of De Havilland "Hercules" machines, each equipped with three air-cooled engines totalling nearly 1,200 h.p. and now in course of construction.

At the commencement the saving of time for passengers or mails going to or from Iraq and India will be as shown in the following table:—

	Time by sea. (days)	Time utilizing air service. (days)	Time saved. (days)
England—Baghdad	23	8	15
England—Basra	22	8	14
England—Karachi and N.W. India ..	17	10	7

In the natural course of events, the Indian Government will be responsible for carrying on the route from Karachi to Calcutta and Rangoon, while a further extension to Australia via Rangoon and Singapore is under consideration and will be an Imperial responsibility.

CAIRO AND EAST AFRICA AIR-LINK.—Another scheme which has been under consideration for some time is for an air-link between Cairo and our East African Colonies, and as the first step towards the establishment of such a service, experimental operations between Khartoum and Kisumu are to be carried out by the North Sea Aerial and General Navigation Company, Limited, which is associated with the Blackburn Aeroplane Company, Limited. The expenses of the operations are being covered partly by grants from the Governments of Kenya, Uganda and the Sudan, and twelve experimental flights will be made in each direction in order to gain the experience upon which plans for a permanent service can be formulated. It is proposed to fly along the valley of the Nile southward from Khartoum as far as Lake Victoria Nyanza and there branch easterly to Kisumu, which is the terminus of the Kenya and Uganda Railway.

The service will not only bring Kenya Colony and Uganda into closer touch with England, but will also improve the very poor communications between the East African Colonies themselves. Assuming that the normal boat and rail service takes twenty days to reach East Africa from England—and it should be remembered that

no regular service is run—the saving in time gained by taking ordinary transport to Khartoum and thence going by air to Kisumu would be eight days. Between Khartoum and Uganda the saving of time by air transport would be from ten to twelve days and between Khartoum and Rejaf at the southerly limit of the navigable Nile fourteen days.

Further stages of development are contemplated which will comprise an air-link between Cairo and Khartoum, saving a further two days on the journey from England to East Africa, and extensions southward with a view to connecting with other proposed services from Cape Town.

BRITISH AIR SURVEY EXPEDITION.—As the result of a decision arrived at after most careful investigation into the results of air survey operations which have been carried out in the past, a contract has been entered into between Minerals Separation, Limited, and the Aircraft Operating Company, Limited, under which the latter company are to send an air survey expedition to Northern Rhodesia in order to carry out air mapping and reconnaissance of the concessions held by the Rhodesian Congo Border Concession, Limited, of which Minerals Separation, Limited, are the general managers. The concessions consist of highly mineralized orchard bush country covering an area of about 52,000 square miles.

As it is anticipated that the scope of the expedition will be considerably extended when once the preliminary work has been carried out, it will be organized so as to be capable of ready expansion when required. At the commencement, the expedition will consist of two D.H.9 machines specially adapted for survey work and fitted with "Nimbus" engines, together with a complete photographic section equipped with the latest British air survey cameras. In order to avoid the danger of forced landings in the bush, sufficient landing grounds are being provided to enable these machines always to be within gliding distance of one of them. As the work extends, however, it is anticipated that aeroplanes which have already been specially designed for air survey and which will be fitted with two or three engines will have to be used to lessen the risk of forced landings.

AVIATION IN FOREIGN COUNTRIES

AFGHANISTAN.

The four machines sold by Mr. Murphy to the Afghan Government, which were badly damaged by a tornado in May, 1925, and have been lying at Peshawar since, were delivered by road during August, 1926. If they cannot be repaired, some of the parts may be useful as spares of which the Afghan Air Force is in need.

A landing ground has recently been made at Herat.

CZECHO-SLOVAKIA.

FLIGHT BY CAPTAIN STANOVSKI.—Captain Stanovski, a Czecho-Slovakian, returned to Prague on 23rd July having completed a tour of 9,300 miles, which he started on 25th May. In the course of the tour he flew over twenty-three countries including France, Morocco, Spain, England, the Baltic States, Poland, Roumania, Turkey, Greece, Italy and Austria. The same aeroplane, and Aero A.11.b with 260 h.p. Perun engine was used throughout the flight.

PRAGUE—PARIS—PRAGUE FLIGHT.—A good flight was recently accomplished by the Czecho-Slovakian pilot, Lieut. Jira, on a Bondy B.H.9 low-wing monoplane fitted with a 60 h.p. Walter radial engine.

Lieut. Jira left Prague aerodrome at 4.50 a.m. on 31st August, and arrived over Le Bourget aerodrome at 11.20 a.m. having made a non-stop flight of 590 miles. He did not land at Le Bourget, but immediately turned homeward and flew back to Prague, arriving at 6.33 p.m. The total distance of about 1,180 miles was thus covered in thirteen hours forty-three minutes in a non-stop flight.

FRANCE.

ADMINISTRATION.—As a measure of economy, all Under-Secretaryships, including that of Air, have been suppressed. The Services, comprised in the Under-Secretariat for Air, viz. :—

The Service de la Navigation Aerienne,
The Service des Fabrications,
The Service Technique,
The Office National Meteorologique,
and the newly-formed Inspectorate General of Aircraft Constuction,

have in consequence, been attached as a Directorate to the Ministry of Commerce.

M. Fortant, formerly director of the Service Technique, has been appointed Director.

MILITARY AIR SERVICE.—Colonel Pujo (recently promoted to General de Brigade) has been appointed successor to General Dumesnil, as Director of Aeronautics at the Ministry of War.

NAVAL AIR SERVICE.—See Naval Notes, page 850.

LONG DISTANCE FLIGHTS.—The following long distance flights have been accomplished by personnel of the French Military Air Service.

Paris—Omsk (Siberia).—Captain Girier and Lieutenant Dordilly, flying a Breguet 19 A.2. machine equipped with a 450-h.p. Hispano-Suiza engine, left Paris on 14th July with the object of breaking the non-stop distance flight record. The machine started at 5.20 a.m. on 14th July and landed at Omsk on 15th July after a flight lasting twenty-nine hours.

The distance covered was approximately 2,915 miles.

The fuel capacity of the machine used for this flight was 600 gallons of petrol and forty-three gallons of oil, sufficient for a flight of thirty hours.

Paris—Bunder-Abbas.—Captain Weiser and Lieutenant Challe, flying a Breguet 19 A.2. fitted with a 500-h.p. Farman engine, left Paris at 6.22 a.m. on 31st August and landed at Bunder-Abbas on 1st September after a flight of twenty-seven hours sixteen minutes.

The distance covered was approximately 3,230 miles.

The amount of petrol carried on this flight was 670 gallons.

Both the above flights beat the long distance non-stop record previously held by Arrachart.

Circular Flight.—Captain Pelletier D'Oisy left Paris on the morning of 24th August, 1926, flying a Potez 25 machine equipped with a 450 h.p. Lorraine engine, and after completing the circuit, Paris—Rome—Tunis—Casablanca—Madrid—Bordeaux—Paris, landed at Le Bourget at 11.14 p.m. on 25th August, 1926.

The flight lasted 41 hours 45 minutes, of which 34 hours 57 minutes were spent in the air, the approximate distance covered being 3,750 miles. 6 hours 48 minutes only were spent on the ground, the greater part of this time being spent in refuelling.

This flight was a remarkable test of endurance for the pilot, no real rest being possible. The last stage (Bordeaux—Paris) was completed in the dark.

GERMANY.

RESULT OF THE "SUDDEUTSCHLANGFLUG" LAND (PLANE) COMPETITION.—This competition, held between 31st May and 6th June, was essentially in the nature of a reliability test for sports aeroplanes, and was divided into two stages:—

- (a) Technical tests on the Mannheim aerodromes, lasting five days.
- (b) Race over a triangular course (Frankfurt-a-Main—Lake Constance—Munich) of approximately 1,250 miles, lasting two days.

The competition also included a series of obligatory landings for all aircraft.

In class (a) prizes to the value of 13,000 Mk. were awarded to the first nine machines (six of which were equipped with engines of less than 40 h.p.), the first prize of 4,450 Mk. going to the Messerschmidt M.17 machine.

In class (b) prizes to the value of 65,000 Mk. were awarded to the first six machines, the first prize of 17,890 Mk. going to the Junkers A.20 machine.

RESULT OF THE "SEEFLUGWETTBEWERB" (SEAPLANE) COMPETITION.—Of an original entry of eighteen aircraft, three only completed the entire course and carried out the prescribed tests.

The competition which took place between 12th & 29th July was divided into three stages:—

- (a) *Eliminating Tests* of a technical nature, comprising:—
 - (i) *Climb* from 3,280 ft. to 6,560 ft. with full load, the time for which could not exceed fifteen minutes.
 - (ii) *Commercial range*, calculated from the fuel consumption flying with the same load as in (i) over a rectangular course (approx. 140 miles), which had to be covered twice.
 - (iii) *Speed test* over same course as in (ii).
- (b) *Reliability Trials.*—Comprising a flight along the German coast and across the Kiel Canal, the extreme points of the course being Borkum and Memel. An average of about 620 miles had to be covered daily (in all approx. 2,500 miles) with four or five intermediate landings.
- (c) *Seaworthiness Tests.*—Such as starting, alighting and various taxiing manoeuvres in a limited area.

Ten machines survived stage (a), whilst at the conclusion of stage (b) only five were left to compete in the final phase of the competition. These are shown hereunder in their order of finish :—

<i>Final placing in the Competition.</i>	<i>Climbing time in mins. from 3,280' to 6,560'</i>	<i>Commercial range in miles.</i>	<i>Max. speed in miles per hour.</i>
1st Place— Heinkel H.E.5, fitted with 450-h.p. Napier Lion engine ..	4.25	586	126
2nd Place— Junkers W.33, fitted with 300-h.p. Junkers L.5 engine ..	5.95	74.3	120.5
3rd Place— Heinkel H.D.24, fitted with 230/300-h.p. B.M.W.IV engine..	7.6	578	104

The two remaining machines, i.e., Heinkel H.E.5, fitted with 420-h.p. Gnome-Rhone Jupiter engine, and Heinkel S.I, fitted with 360-h.p. Rolls-Royce Eagle IX engine, were obliged to abandon the competition at the first and third landings respectively of the seaworthiness tests.

ITALY.

SEAPLANE TOUR OF THE ITALIAN COASTS.—On the initiative of the National Institute of Air Propaganda at our of the Italian coasts is to be made by a Macchi 24 flying-boat.

The machine will start from Ventimiglia and proceed along the western coast to Trapani, and thence along the Ionian and Adriatic coasts. It is proposed to visit 130 places along the coasts, at each of which propaganda lectures will be delivered. Free flights will be given to members of the Aero Club. The expenses of the tour will be borne by the authorities of the places visited.

WORLD FLIGHT.—The world flight of Colonel de Pinedo, which was to have started early in August has been postponed in order that various improvements to the machine might be made.

SCHNEIDER CUP.—One of the Italian Schneider Cup machines, a Macchi .39 Floatplane, recently made its first flight:

CIVIL AVIATION.—The extensive plans for civil air transport services which have been under the active consideration of the Italian Government for some time past have developed to the extent that the following lines are now actually in operation :—

Brindisi—Athens—Constantinople.
Trieste—Turin.
Genoa—Rome—Naples—Palermo.
Venice—Vienna.

All these lines are subsidised by the Italian Government and are operated exclusively by Italian Companies with the exception of the Venice—Vienna line which is operated jointly by an Italian company and an Austrian company. Plans for the establishment of many other lines are being actively pursued.

POLAND.

LIEUTENANT ORLINSKI'S FLIGHT TO TOKIO AND BACK.—A long distance flight from Paris, via Warsaw and Siberia to Tokio, had been arranged by the Polish Military Air Service to take place in May, and Lieutenant Orlinski, of the 11th Fighter Regiment, started on 24th May from near Paris on a Potez XXV with a 480-h.p. Renault engine, but engine trouble compelled him to land near Prague in difficult terrain, and the aeroplane was so damaged that the flight had to be abandoned.

He made a second attempt, however, on a Breguet XIX with a 450-h.p. Lorraine Dietrich engine, starting from Warsaw at 4.25 a.m. on 27th August. He had with him Sergeant Mechanic Kubiak, who accompanied Colonel Rajski on his flight Paris—Casablanca—Constantinople—Warsaw last year.

The machine reached Moscow at 11.10 a.m. and started again at 1.25 p.m. for Kazan, which was reached some two hours later. Bad weather prevented a continuance of the flight the next day, but on the 29th it left at 5.20 a.m. and arrived at Omsk at 1.20 p.m. The next day it reached Krasneyarsk. On 1st September, Chita, in Siberia, was reached, on the 2nd, Kharbin in Manchuria, while the machine finally arrived at Tokio at 4 o'clock in the afternoon of the 6th, having covered about 7,000 miles in ten days.

Lieutenant Orlinski left on the return journey on the 11th, intending to reach Mukden before nightfall, but the stormy weather forced him to land at Okayama at mid-day. He re-started the following day, but did not reach Kazan till the 23rd, and arrived back in Warsaw on 25th September, the last part of his flight from Moscow to Warsaw, a distance of 1,055 miles, being covered at the rate of 168.8 miles per hour, and without landing.

Thus, the whole flight from Warsaw to Tokio and back again, a distance of roughly 14,000 miles was completed in under a month including all stops.

SOVIET RUSSIA.

PROPAGANDA FLIGHTS.—The "Aviochim," which is the volunteer organization for aiding aviation and chemical defence and industry, and closely allied to the Government and the Red Army, projected four main flights for the summer of this year, two to embrace the Near East and two Western Europe. The Society was authorised by the Council of People's Commissaries to collect voluntary subscriptions over a period of six months throughout the Soviet Union.

These flights have since been commenced, and on the whole have been successful. That to Tehran and back was a fine performance, the return flight being especially successful as it was accomplished in a day (17½ flying hours). That to Angora was good, but the Paris flight was abandoned after five forced landings in Germany due to engine trouble. The fourth flight to Paris, Rome, Vienna and back to Moscow was completed (4,375 miles) in 34 hours 22 minutes flying time on three consecutive days.

Details of the separate flights are as follows :—

(1) *Moscow—Rostov—Mineralski Vodi—Baku—Teheran and back to Moscow* (4,875 miles).—The pilot was Y. N. Moiseyev, who holds the three orders of the

"Red Standard," and is well-known for his propaganda flights. The machine was a Russian-built "R.1" with 400-h.p. "M.5" (Liberty type) engine, and is a copy of the well-known D.H.9a. The flight started on 14th July at 12.22 a.m. from Moscow. A halt was made at Mineralski Vodi, and Baku reached at 5.32 p.m. the same evening. The machine set off again at 7.35 a.m. on the next day, but the flight from Enzeli was difficult; owing to clouds, the machine could not cross the Mendjisk Mountains and had to return to Pakhlevi. On the 16th it left again and successfully reached Teheran.

The return trip was commenced about midnight of the 23/24th, and the flight over the mountains accomplished in the night. Halts were called at Baku (3.20 a.m.) and Kharkov (2.25 p.m.), and the machine reached Moscow at 7.50 p.m. the same evening.

(2) *Moscow—Kharkov—Sevastopol—Angora* (1,169 miles).—The pilot was Mezherup, who also holds the three orders of the "Red Standard," while the journalist, Koltsev, was carried as a passenger. The machine was similar to the one which flew to Teheran.

The flight started at 2.02 a.m. on 19th July from Moscow, reached Kharkov at 5.43 a.m., departed at 7.55 a.m., and arrived at Sevastopol at 11.58 a.m. There was a wait of sixteen hours here, so the flight was not resumed till 4.16 a.m. on the following morning. Angora was reached at 7.45 a.m. on that day, the 20th. Although it had been announced that the return journey would be made by the 20 flying hours' route (Angora—Erdzhindzhan—Tiflis—Vladikavkaz—Rostov on Don—Moscow), no such journey was made, the party returning by land.

(3) *Moscow—Berlin—Frankfort—Paris—Frankfort—Konigsberg—Moscow* (3,750 miles).—The pilot was Shibanev, who served with distinction in the civil war and has been flying on civil routes, mainly the Konigsberg—Moscow line. The Inspector of Civil Aviation, Vishnev, was a passenger.

The machine was a Russian-built "P.M.1," an eight-seater with a 260 h.p. Maybach engine of foreign construction. The blame for the subsequent abandonment of this flight was laid on the foreign origin of this engine.

The flight commenced at 2.30 a.m. on 16th July from Moscow, and Konigsberg was reached at 10.20 a.m. where the journey ended for that day owing to a "break-down." Soon after leaving the following day, bad weather forced the machine to land. It apparently finally reached Danzig that day, and the next morning left at 8.30 a.m. It had two forced landings, one at Schwelwein and the other at Schwedt on the Oder, owing to water leakage, but reached Berlin on the morning of the 19th.

Here Vishnev gave a lecture at the Russian Embassy on the activities of the Abiochim. He stated that the objects of this, and the other flights were to instil interest in aviation into the masses of Russia, and to get into touch with aviation in the adjoining countries of Western Europe.

The machine set forth again on the 21st at 7.30 a.m., but had one forced landing near Fordhelm in Westphalia and another near Cologne, and reached Dortmund, where the flight was abandoned.

(4) *Moscow—Konigsberg—Paris—Rome—Vienna—Prague—Warsaw—Moscow* (4,375 miles). The pilot of this flight was Gromov, who flew on the Moscow-Pekin flight last year, and has received the "Red Standard" and the title of a

"Meritorious National Flier." The machine was an "Ant.3," designed by the Russian engineer, A. N. Tupolev, of all-metal construction with a 450-h.p. Napier Lion engine, the whole machine being a copy of the D.H.9a.

They left Moscow at 3.25 a.m. on 31st August and arrived at Königsberg at 9.30 and at Berlin at 10.15 a.m. The machine left Berlin at 2.30 p.m. and arrived at Le Bourget (Paris) at 7.12 the same evening. They set off at 6.25 the following morning, arriving at Rome at 2.50 p.m., 1st September.

The next day they reached Moscow again, via Vienna and Prague at 6.15 p.m.

Their actual flying time was 34 hours 22 minutes.

TURKEY.

Though hampered financially, Turkey continues to be interested in the building up of a small Air Force, and has now about one hundred serviceable and unserviceable aircraft of all types. The Turk appears to favour Junker all-metal monoplanes for fighter work and the Breguet 2-seater biplane for reconnaissance and bombing. Up to the summer of 1926 they had very few single-seater fighters, but they now contemplate the purchase of a number of such aircraft and, in order to decide on a type, have lately held a trial in which the best single-seater fighters of French and Rohrbach (Danish-German firm near Copenhagen) manufacture were tested. It is not yet known whether a selection was made, but it is expected that a dozen or so of the winning type will be purchased in Europe during 1927.

UNITED STATES.

U.S. ARMY AIR CORPS—FIVE YEAR EXPANSION PROGRAMME.—Period of expansion 1st July, 1926, to 30th June, 1931. The programme aims at increasing the strength of aircraft during the five years to a total of 1,800 (including training and Reserve) machines, and at maintaining that number thereafter by annual replacements not exceeding 400 machines.

It is the intention to increase (as far as possible) the present allotment of officers (i.e., 1,247) during the period of expansion to a total of 1,650, and other ranks from 8,342 to a total of 14,580.

Although the President has authorised the programme outlined above, it cannot be started until supplementary estimates on a large scale have been passed by Congress.

CIVIL AVIATION IN U.S.A.—The U.S.A. Civil Aviation Bill has become law, and is known as the "Air Commerce Act of 1926." The law provides for the establishment of a Bureau of Commercial Aviation within the Department of Commerce, and for the appointment of a new Assistant Secretary of Commerce to be in charge of the new section, which is to be responsible for the issue of general regulations governing air traffic, the registration of machines and issue of certificates of airworthiness and pilots' licenses and for the general development of civil aviation.

In addition the Bureau will be responsible for the control and co-ordination of the various services which are to be carried out by other departments in connection with the furthering of air navigation facilities. Of these services, investiga-

tion, with a view to the perfection of navigational aids such as lighting systems and radio direction, finding will be conducted by a new division of the Bureau of Standards acting in co-operation with the Guggenheim foundation, the Army Air Service and other governmental agencies. The mapping of air routes will be undertaken by a new division of the Coast and Geodetic Survey Department, while a new division to be established in the Bureau of Lighthouses will be responsible for work previously done by the Post Office in connection with lighting and marking the air mail routes and the establishment of emergency landing grounds.

Of the 9,745 miles of airways now in operation or proposed for the near future, 2,041 miles are already equipped with lighting apparatus and the department hopes to light a further 1,167 miles during the current fiscal year.

The following air mail routes are now in actual operation :—

Post Office Routes. Miles.

New York—San Francisco	2,680
New York—Chicago	780

Contract Routes.

Boston—New York	192
Chicago—St. Louis	278
Chicago—Dallas—Forth Worth	1,000
Salt Lake City—Los Angeles	660
Elko—Pasco	437
Chicago—St. Paul—Minneapolis	377
Atlanta—Miami	550
Chicago—Detroit—Cleveland	328
Cheyenne—Pueblo	205
Washington—Philadelphia	124
Detroit—Grand Rapids	135
Juneau—Petersburg (Alaska)	115
Seattle—Victoria	84
New Orleans—Pilottown	80

8,025

GERMANY.

Assuming Development.—By the terms of the Allied-German Air Agreement of May 1920, details of which were published in the *Forces* for August, 1920, the regulations then in force for assuming the execution of Article 108 of the Treaty of Versailles were abrogated. These regulations, on the other hand, Germany

AIRSHIP NOTES

GREAT BRITAIN.

NEW AIRSHIPS—EXPERIMENTAL WORK.—The experimental bay equal in section to the lay-out cross-section of R.101 has now been erected, and the experimental results compared with the theory on which it was built. During the tests a full-size gasbag was inflated within the bay and tests to simulate the conditions the airship would have to meet when in flight carried out. The tests were completely successful, and with minor exceptions have confirmed the soundness of the theory on which the structure was designed and have also given most helpful information towards the completion of the final design.

The Airship Guarantee Company having successfully tested their girders are now proceeding to manufacture.

The full scale tests of R.33 have now been compared with the model results obtained at the National Physical Laboratory. These tests show close agreement and have therefore established confidence in the correctness of the assumptions made on model tests as to the conditions which airships will have to meet when in free flight.

Factory work on the framework of the hull has now commenced, and the construction of a large number of the auxiliary portions of the ship such as engine cars, control cars, gasbags and living accommodation are well in hand.

PROGRESS OF AIRSHIP STATIONS—Cardington.—The shed and mast are now complete except for minor adjustments in regard to the mast which have to be made in the passenger lift.

Egypt.—This mast station is not yet complete. Work was still to be done in regard to the mast head.

India.—The first consignment of steel work for the Indian shed has now arrived, and the concrete foundations have been commenced.

The mast for this base has been delivered at Cardington, where it is remaining in store for the present.

GERMANY.

AIRSHIP DEVELOPMENT.—By the terms of the Allied-German Air Agreement of May, 1926 (details of which were published in the JOURNAL for August, 1926), the regulations then in force for assuring the execution of Article 198 of the Treaty of Versailles were abrogated. These regulations (or, as they are more generally

known, the Nine Rules) stipulated that "Airships with a cubic capacity exceeding the figures given below shall be deemed to be military airships":—

(i) Rigid airships	30,000 cubic metres.
(ii) Semi-rigid airships	25,000 " "
(iii) Non-rigid airships	20,000 " "

With the exception of the Zeppelin L.Z.126, otherwise known as Z.R.3 or "Los Angeles," which was built specially for the U.S.A., no airship has been constructed in Germany since the late war.

In the autumn of last year a public appeal for funds, with which it was proposed to build a new airship intended for Polar Exploration, was made by Dr. Eckener, of the Zeppelin Works of Friedrichshafen. This appeal was prompted by two motives, firstly, the desire to construct a new airship (to be designated the L.Z.127), and, secondly, the need for money with which to maintain the Zeppelin Works, which were on the point of closing down.

Since the signature of the Air Agreement referred to above the scheme for the construction of the new Zeppelin has taken a more tangible form. The size of the ship, about which there had been some doubts whilst the Nine Rules were still in operation, has been announced, and, in addition, the original intention of using the ship for Arctic exploration appears to have been abandoned in favour of experiments with a view to establishing a regular trans-Atlantic service by airships.

In spite, however, of the foregoing, very little progress has actually been made with the new airship. It appears extremely doubtful if construction has commenced at all and even whether the designs are yet complete. Subscriptions to Dr. Eckener's appeal fund are said to have reached two and a half million Marks, out of a total required of seven million Marks, and it seems probable that much of the amount collected has been expended in maintaining the Works during the last year.

Published details of the new airship which are reproduced below include a report to the effect that Dr. Lempertz, chief chemist of the Zeppelin Company, has discovered a new fuel which is in gas form and is stated to be superior to petrol and of the same specific gravity as air:—

Designation of airship	L.Z.127.
Cubic capacity of airship	105,000 cubic metres ("Los Angeles" is 70,000 c.m.)
Engines of airship	Five 420 h.p. Maybach.
Probable date of completion	Autumn, 1927.

ITALY.

AIRSHIP "NORGE."—The Italian airship N.1, re-named "Norge," which was sold to Amundsen for his trans-polar flight, has been re-purchased by Italy. It will be re-conditioned and put into commission for Service use.

UNITED STATES.

U.S. NAVY METAL-COVERED AIRSHIP.—The Navy department have recently awarded to the Aircraft Development Corporation of America a contract for the construction of a metal-covered airship the building of which was authorised by Congress under the five year expansion programme. The airship is being built for experimental purposes, and is to be delivered to the Naval Air Station, Lakehurst, N.J., within 400 days. The dimensions and main characteristics are understood to be as follows:—

Length 150 ft.

Maximum diameter 53 ft.

Capacity 200,000 cu. ft.

Cruising radius, when filled with Hydrogen 2,000 miles

Cruising radius when filled with Helium 1,200 "

Engines—two (type unknown) each to be of 200 h.p.

Speed 50-60 m.p.h.

Crew—four, with accommodation for eight passengers.

in great measure of the progress of this project has actually been made. It appears extremely doubtful whether the design is yet complete. Subsequently in the afternoon of the 10th a report was received from the Navy Department that the design of a metal-covered airship had been approved by the Navy Department. The report stated that the design of a metal-covered airship had been approved by the Navy Department. The report stated that the design of a metal-covered airship had been approved by the Navy Department. The report stated that the design of a metal-covered airship had been approved by the Navy Department.

Further details of the new airship will be reported before long. It is expected that the new airship will be completed by the end of the year. The new airship will be a metal-covered airship. The new airship will be a metal-covered airship. The new airship will be a metal-covered airship. The new airship will be a metal-covered airship.

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ITALY.
The Italian airship N.1, re-named "Norge", which was built for the Italian Navy, has been re-purchased by Italy. It will be re-constructed and put into commission for service.

REVIEWS OF BOOKS

The British Navy in Adversity. By Captain W. M. James, C.B., R.N.
(Longmans, Green & Co.). 25s.

Captain James has the distinction of being the first writer to attempt a real study of the War of American Independence, using the original authorities, which were not at the disposal of Admiral Mahan. He has succeeded to a remarkable degree in presenting a full account of the naval and military operations, all within the compass of a single volume. The limited object of the war was to retain possession of the American Colonies; and after France, Spain and Holland had joined against us and the war had spread to India and the West Indies, sea communication became the deciding factor. The author's main theme is that in this war we lacked ships, men, bases, material and true leadership, and this idea is continually put before the reader's mind with a fine sense of balance and restraint. Similarly, the great controversial topics, such as Ushant, the Saints and St. Eustatius, are dealt with as controversies, but are never allowed to monopolise space and confuse the reader with a blur of details.

Again, the enemy by sea is treated as having a real personality and not, as so often is the case, acting as a meek punching ball for British fists. The thumb nail portraits of d'Estainy and Suffren are particularly happy examples of showing the reaction of personality and environment.

With the land fighting the author is, naturally, less at his ease. The description of the Saratoga campaign is excellent, but Washington's army acts like a swarm of "robots." The author seems to have missed, somewhat, the importance of the struggle between Congress and the States to control the troops. Again, lack of comprehension of the Americans as they then were, as distinct from what Englishmen thought about them, results in a misunderstanding of the attempts to raise the loyalists and the conciliatory attitude of North at home, and Howe and Gaye on the spot.

But it is in the description of the higher command that the author is found most wanting. No attempt is made to explain the mutual relations of the "Principal Secretaries of State" with the Admiralty and the War Office. Consequently, although we are again and again shown the evil result of these relations, the cause of them is only referred to as "the disturbed political atmosphere of the day." Failure to blockade Brest and so cut off French support for the West Indian campaign; failure to concentrate forces and make united efforts; failure to let the men on the spot make their own plans; all the results of these evils are shown. But the first cause, failure in the initiation of policy at the fountain head, is hidden. Yet with all these defects we held our own against the enemies' combined fleets. Some of the best sentences in the book are those that describe the inability of the French and Spaniards to profit by our mistakes. Their perverted tactical doctrine and lack of the offensive spirit caused them to mishandle miraculous opportunities.

Some further account of the signalling system and its development would have been very welcome at this point, and the lack of it leads to over simplification in drawing conclusions. This indeed is the chief defect of the book, which at times takes the form of note-book jottings rather than English prose. In places it is not historically accurate, while the diagrams, although vivid and original, would be more valuable if they indicated the direction of the wind.

Nevertheless, Captain James has succeeded in stating his theme and keeping it before the reader's mind in a way which is seldom equalled in the writing of Naval History. It is the best book on such a subject that has yet been written by any living Naval officer.

Imperial Defence, 1588-1914. By Colonel J. F. C. Fuller, D.S.O. (Sifton, Praed & Co., Ltd.). London. 3s. 6d.

This little book is, as the author rightly remarks, only an introduction to the present problems of Imperial Defence; but it is a forcible review of the subject and one, too, which should appeal widely to all students of its great theme.

If he errs it is from over enthusiasm for purely military needs and he does not always make allowances for the political and economic sides to the question, nor indeed for the psychology of his fellow countrymen. For instance, no British Government, in the latter half of the nineteenth century, could have hoped to induce the nation to accept compulsory service, nor could they have vastly increased expenditure on the fighting Forces.

Colonel Fuller hardly makes due allowance for influences, other than naval and military necessity, which promoted interest in Imperial Defence. For instance, in the latter part of Queen Victoria's reign, there is little doubt that the growing prosperity of Imperial commerce, the robust patriotism and human appeal of the literature of the Kipling school and the pomp and circumstance of the Jubilee pageants, all played their part in this matter.

To-day, however, there is little doubt that cold utility is the dominating factor and Imperial Defence must be attuned with national finance and the growing desire of the individual for peaceful security and the amenities of life which come with increased prosperity. If some of the author's arguments were pushed to their ultimate conclusion, the Government would have been committed to a policy not unlike the Bismarkian model which, in its debased and later form, he justly castigates.

In his final chapter he gives us a trenchant review of post war conditions. These, he argues, are the result of a victory for the Allies, which was "physical but not psychological." It "seriously wounded the German war body, but did not destroy the German war spirit . . . the Armistice of 1918, secured the frontiers of the British Empire, but it did not secure the eastern frontier of France." Ever since then, he says: "France has attempted to rectify the colossal mistake of the Armistice by establishing a new 'Confederacy of the Rhine,' a buffer state which will secure the French frontier." He visualises a France "mentally at war with Germany," while we have become a neutral, trading with her.

Lastly, he shows up some of the absurdities of the more extreme advocates of the League of Nations as a panacea for all international evils. Like Mr. Bowles, in his *Strength of England*, he suggests that we can do more for humanity if we "get behind our sea wall and establish a League of British Nations." In ending on this note he is likely to find himself in the company of an increasing number of the more sober-minded and thoughtful of his fellow countrymen. The book is concise and to the point, and a useful addition to the works of this prolific writer.

The Armies of the First French Republic and the Rise of the Marshals of Napoleon I. The Armée of the Nord. By the late Colonel Ramsay Weston Phipps, formerly of the Royal Artillery. 1926. (Oxford University Press). 18s.

This is a valuable and interesting contribution to Napoleonic literature, in that it supplies the key to much that must otherwise remain obscure or entirely misunderstood. There is also supplied a picture of the early French Republican Armies which is of real value. The careers of Kellermann and of Jourdan are truly worthy of study. Then there is the rise and desertion of Dumouriez, which event exercised a lasting influence on the military development of the First Republic. It is surprising to find how many of the Napoleonic Marshals were already "made men" long before they were raised to the Marshalate by the newly created Emperor. The animosities and jealousies of the Napoleonic Corps Commanders in many cases owe their existence to incidents of these early wars. The student of the early campaigns on the Sambre, of the battles of Valmy and of Wattignies will find ample matter in these pages. The bibliography given at the beginning is proof of the industry and erudition of the late author.

A Brief Outline of the Campaign in Mesopotamia, 1914-1918. By Major (Temp. Lieut.-Colonel) R. Evans, M.C., p.s.c., Royal Horse Guards. (Sifton, Praed & Co., Ltd.). London, 1926. 7s. 6d.

The author does not aspire to have produced more than an epitome of his subject. In 135 pages he cannot do more than summarize the main points of the campaign. But he performs his task well and, though succinctly told, the narrative reads easily. The official history has been closely followed as far as it goes; yet occasional criticisms are interpolated; there is a pleasant and very true sketch of Sir Stanley Maude; a sympathetic appreciation of Sir Percy Lake's work; a few lighter touches complete a truly readable summary of this complicated campaign.

The book should be useful to those reading the campaign for examinations, but even for this purpose, it cannot stand alone; it requires the support of some outside reading, in both official and unofficial works.

The maps are clear; there is no index.

Gallipoli To-day. By T. J. Pemberton (Ernest Benn, Ltd.). London, 1926. 10s. 6d.

Although to a casual glance, the book appears to be merely a record of the burial places of the British dead, and a chronicle of the memorials set up to the 40,000 warriors of the Empire who were killed or missing in the Dardanelles campaign, it fulfills a deeper purpose than this. As but a small proportion of those whose Own Dead lie beneath the distant soil of Gallipoli will ever set eyes on the spot, it is only fitting that there should be a descriptive record of the various patches of that wild and lonely peninsula "that are for ever England"; and such a record is supplied by Mr. Pemberton's clear and sympathetic narrative, supplemented by a large number of excellent photographs. To the relatives of the fallen, the book should bring consolation, as it sets forth the tender, yet practical, care which has been lavished on the mortal remains of the victims of the bitter eight months struggle.

The book has quite another interest for the serving soldier and the student of tactics. The description of the country is exceedingly good and, with the aid

of the illustrations, the reader who has never seen Gallipoli will be greatly assisted in his endeavour to make a mental picture of the battle-ground. The portrayal of this desolate, sea-girt tongue of land, of its flora and fauna and of the few inhabitants who dwell upon it, is vividly carried out, and it should be of material help to students of the campaign if read in conjunction with the standard works.

All the World's Aircraft, 1926. Compiled and Edited by C. G. Grey and Leonard Bridgman. (Sampson, Low). 42s. net.

This volume, which is the sixteenth of the series, provides a comprehensive survey of aeronautics for the past year. It gives historical notes on the progress of aviation in the countries of the world and brief descriptions, accompanied by photographs, line drawings and performance figures, of the latest aircraft.

Especially interesting are the details of German and Russian aviation revealed in the historical section. It appears that Germany has forty-three air lines, as compared with France's eleven and Britain's five. Light is shed on Russia's aerial ambitions in the following passage: "The Soviet authorities have devoted much time and money to the development of aeronautics in the Union of Socialist Soviet Republics. They make no secret of their intention to create a powerful air fleet; indeed, they claim that the Red Air Fleet will ultimately be the most powerful in the world, capable of dealing with any probable combination of fleets which the capitalist world may oppose to it."

In the section on machines the method of construction and clean lines of the wonderful French Bernard monoplane, holder of the world's speed record of 278.4 m.p.h., may be studied and there is a clear explanation of the principle of the new Cierva Autogiro (sometimes called the "Windmill" Aircraft). Sections of the work are devoted to aero engines and to airships. In completeness and uniformity of treatment this volume is an advance on previous volumes. But the compilers and editors, Mr. C. G. Grey and Mr. Leonard Bridgman, seem to have been hampered by the official secrets regulations. In the descriptions of British machines the reader is constantly tripped up by the remark: "No details as to construction and performance may be published." This statement, or some variation of it, seems to appear on almost every page of the part devoted to British aircraft.

The figures given are not always accurate (as in the conversions of kilometres to miles), but generally the volume is a model of careful compilation. It holds a unique position among aeronautical works of reference and is indispensable to anyone wishing to keep himself informed of the march of aeronautical progress.

A Copy of Papers relating to Musters, Beacons, Subsidies, Etc., in the County of Northampton, A.D. 1586-1623. Edited by Joan Wake; with an Introduction by John E. Morris, D.Litt., Litt.D. Being Volume III of the Publications of the Northampton Record Society, 1926.

Though scarcely likely to interest the general reader, this volume should appeal to the student and to the historian. The introduction contains a detailed picture of the methods by which the constitutional armed forces of those days were raised, trained and supplemented by professional elements, during a most interesting and all too little known period of British military history. Yet it does more than that for its opening and concluding pages virtually sum up the history of the militia from the earliest Saxon days and, through the period under review, right down to the present day.

DIVISIONAL AND REGIMENTAL HISTORIES.

The History of the 35th Division in the Great War. By Lieut.-Colonel H. M. Davson, C.M.G., D.S.O., R.A. (retired). (Sifton, Praed & Co., Ltd.). London, 1926. 21s.

The 35th Division was formed early in 1915, and was then known as the "Bantam" Division. This was the official title of the formation which it adopted from the fact that it was formed of men who had not attained the minimum height standard for normal army service. Recruits were not to be less than 5 feet nor more than 5 feet 3 inches in height. The original troops were found to be of good stamina and fit for hard work, but very soon the reinforcements went down in quality, since the lesser height standard was made an excuse for passing in men of far too weak a stamina. So the Division was converted into a normal division.

The present volume thus becomes the usual record of a division that fought well from its initiation into active service from the Somme in April, 1916, until the very close of the campaign. The book is cast in the form of a brief and well-balanced account of that period of the war. It is furnished with some very clear plans, two serviceable maps and an index.

A History of the Black Watch in the Great War, 1914-1918. Vols. II and III. Edited by Major-General A. G. Wauchope, C.B. (The Medici Society). 7s. 6d. per volume.

It is a pleasant task to extend to Volumes II and III of this history the welcome already accorded to the first volume. Following the principle by which he was guided in the beginning, the editor now gives biographies of the Territorial and Service Battalions of "The Watch" with a wealth of appendices to each.

Volume II deals with the fortunes of the Territorial Battalions of which the 4th, 5th, 6th and 7th all distinguished themselves on the Western Front, and their stories are simply but adequately told; while the inclusion of brief but comprehensive chapters on the allied Colonial Regiments is a singularly happy thought. The Reserve Units are also noticed with considerable detail. Volume III tells of seven Service Battalions, of which six served overseas. The 8th, 9th and 12th saw all their service in Flanders, the 10th and 13th in Macedonia, and the 14th in Palestine; the 13th and 14th are especially interesting as they represented two famous Scottish Yeomanry Regiments turned into infantry—the former was previously the Scottish Horse and the latter the Fife and Forfar Yeomanry.

Full accounts have been given of the chief actions in which the various battalions took part, and special attention has been devoted to descriptions of regimental life. A marvellously cheap book and remarkable value at the price.

PRINCIPAL ADDITIONS TO THE LIBRARY

August, September and October, 1926.

- THE BRITISH NAVY IN ADVERSITY: A STUDY OF THE WAR OF AMERICAN INDEPENDENCE.** By Captain W. U. James, C.B., R.N. 25s. 8vo. (Longmans, Green & Co.). London, 1926. (Presented by the Publishers).
- SECRET AND CONFIDENTIAL.** By Brig.-General W. H. H. Waters, C.M.G., C.V.O. 18s. 8vo. London, 1926.
- NAVAL RECORD SOCIETY. Vol. LX. SAMUEL PEPYS'S NAVAL MINUTES.** Edited by J. R. Tanner. 8vo. London, 1926.
- THE OXFORDSHIRE AND BUCKINGHAMSHIRE LIGHT INFANTRY CHRONICLE, 1925.** (Illustrations). 8vo. (Eyre & Spottiswoode, Ltd.). 1926. (Presented by the Chronicle Editorial Committee).
- THE CHINESE ARMY AS A MILITARY FORCE.** By L. Impey. 12s. 6d. 8vo. London, 1926.
- INTERNATIONAL LAW AND THE WORLD WAR.** By J. F. Garner. 2 Vols. 42s. 8vo. London, 1920.
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- IMPERIAL DEFENCE, 1588-1914.** By Colonel J. F. C. Fuller, D.S.O. 3s. 6d. 8vo. (Sifton, Praed & Co.). London, 1926. (Presented by the Publishers).
- A BRIEF OUTLINE OF THE CAMPAIGN IN MESOPOTAMIA, 1914-1918.** By Lieut.-Colonel R. Evans, M.C. 7s. 6d. (Sifton, Praed & Co.). London, 1926. (Presented by the Publishers).
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- INDIA.** (Being the Inaugural Lecture delivered at the Nineteenth Local Lectures Summer Meeting of the University of Cambridge, 1926.) By The Rt. Honbl. The Earl of Ronaldshay, G.C.S.I., G.C.I.E. 8vo. (University Press). Cambridge, 1926. (Presented by the Publishers).

- REICHSARCHIV, SCHLACTEN-DES-WELTKRIEJES. Vol. IV. "Jildirim" Deutsche Streeter auf Heiligem Boden. Dr. Steuber. 8vo. Berlin, 1925.
- THE CAMPBELLS OF ARGYLL. By H. T. Skae. 8vo. London. (Bequeathed by the late Major Sir Duncan A. D. Campbell, Bart., C.V.O.).
- THE ROLL OF THE VICTORIA CROSS. Compiled by Lieutenant W. M. Lummis, M.C. Folio. Belgaum, 1925. (Presented by Lieutenant W. M. Lummis, M.C.).
- THE ARMIES OF THE FIRST FRENCH REPUBLIC AND THE RISE OF THE MARSHALS OF NAPOLEON I. THE ARMÉE DU NORD. By the late Colonel R. W. Phipps. 18s. 8vo. (Oxford University Press). London, 1926. (Presented by the Publishers).
- GOVERNMENTS AND WAR; A STUDY OF THE CONDUCT OF WAR. By Maj.-General Sir F. Maurice, K.C.M.G., C.B. 8s. 6d. 8vo. (Heinemann, Ltd.). London, 1926. (Presented by the Publishers).
- NOTES ON THE CAMPAIGN IN FRANCE, 1914; FROM THE BEGINNING OF HOSTILITIES TO THE END OF THE BATTLE OF THE AISNE. By Lieut.-Colonel A. Kearsey, D.S.O., O.B.E., p.s.c. 3s. 8vo. (Sifton, Praed & Co.). London, 1926. (Presented by the Author).
- NOTES ON THE ROYAL MILITARY COLLEGE OF AUSTRALIA, DUNTRON. (Illustrations). Folio. Duntroun, 1926. (Presented by the Commandant).
- ALL THE WORLD'S AIRCRAFT, 1926. Compiled and Edited by C. G. Grey. £2 2s. Folio. (Sampson, Low). London, 1926. (Presented by the Publishers).
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- ON THE WESTERN FRONT; 1/3RD MONMOUTHSHIRE REGIMENT. Edited by W. H. B. Somerset, H. G. Tyler and L. O. Whitehead. 8vo. (Sergeant, Brev.-Lieut.). Abergavenny, N.D. (Presented by the Editors).
- A HISTORY OF THE BLACK WATCH (ROYAL HIGHLANDERS) IN THE GREAT WAR, 1914-1918. Edited by Major-General A. G. Wauchope, C.B. Vol. II: Territorial Force; Vol. III: New Army. 8vo. (The Medici Society). London, 1926. (Presented by the Author)

THE YEOMANRY CAVALRY OF WORCESTERSHIRE, 1914-22. By "C." (Illustrations). 8vo. Stourbridge, 1926.

THE HISTORY OF THE 35TH DIVISION IN THE GREAT WAR. By Lieut.-Colonel H. M. Davson, C.M.G., D.S.O. 21s. 8vo. (Sifton, Praed & Co., Ltd). London, 1926. (Presented by the Publishers).

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JOURNAL

OF THE

Royal United Service Institution

WHITEHALL, S.W. 1

PUBLISHED UNDER THE AUTHORITY OF THE COUNCIL.

Authors alone are responsible for the contents of their respective Papers.

VOL. LXXI.

FEBRUARY TO NOVEMBER, 1926.



LONDON:
ROYAL UNITED SERVICE INSTITUTION,
WHITEHALL, LONDON, S.W. 1

—
1926.

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VOL. LXXI.

JOURNAL

Journal of the Royal Society of Medicine

Volume 10, Part 1

January 1917

Published by the Royal Society of Medicine

11, Bedford Square, London, W.C.1

For 1917

Subscription price 10s. 6d.

LONDON:

J. J. KELIHER & CO., LTD.,

MARSHALSEA PRESS,

SOUTHWARK, S.E.1



ROYAL SOCIETY OF MEDICINE

11, BEDFORD SQUARE, LONDON, W.C.1

1917

Printed by the Royal Society of Medicine

1917

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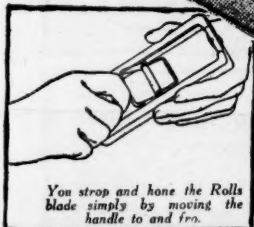


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